



# PLATE N.

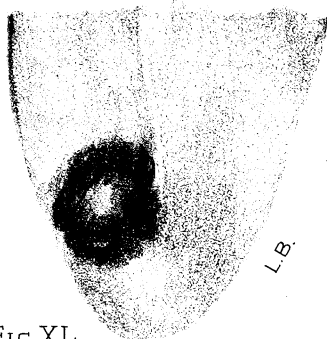


FIG. XL.  
EPITHELIOMA OF TONGUE  
PRIOR TO ULCERATION.

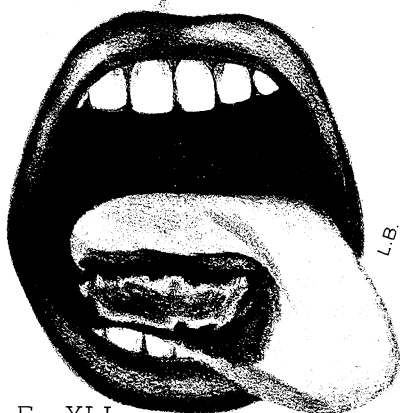


FIG. XLI.  
EPITHELIUM RESULTING  
FROM CARIOUS TEETH.

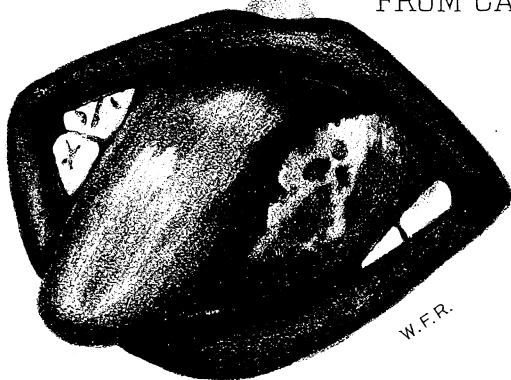


FIG. XLII. EPITHELIOMA OF TONGUE.



FIG. XLIII.  
EPITHELIOMA OF CHEEK.

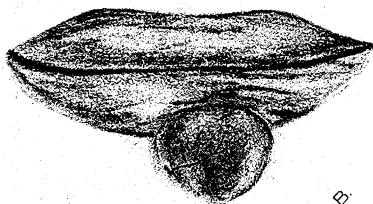


FIG. XLIV. SARCOMA.

# ITEMS OF INTEREST.

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## ORIGINAL COMMUNICATIONS.

ORAL DISEASES;

SURGICAL AND NON-SURGICAL.

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[CONTINUED FROM PAGE 392.]

### MALIGNANT GROWTHS.—EPITHELIOMA.

By far the greater number of tumors met with in the region of special interest to the oral surgeon, we find epithelioma the one to occur most frequently. Its pathology is of great interest, and a more careful inquiry into the causation may influence the prognosis.

Epithelial tumors have been described "as growths of some or all tissue elements in excessive degree and erratic forms, in which there is great vegetative power (power of growth in contradistinction to vegetative power), the members of which are highly parasitic and malignant, involving both locally and generally, by direct infection through the lymphatics and blood-vessels. Secondary deposits may involve any tissue."

Epithelial tumors originate from one of the primary layers, viz., mesoblast, though it may involve both the epi- and hypo-blastic layers.

Two types of epithelial tumors are met with: the squamous and the columnar, taking its type from the tissue from which it springs. The varying types of epithelioma depend entirely on the rapidity of growth, location, and can be distinguished microscopically from papilloma, from the fact that the epithelial growth does not retain its relative position to the connective tissue and corium, but involves the structures through the lymph spaces; and when this takes place it becomes malignant in character, the growth rapidly increasing in size.

Pathologically speaking, an epithelioma presents to the naked eye a warty growth, with an ulcerating surface covered by granulations, whose summits are surmounted by a whitish deposit, giving it a cauliflower appearance. The body of the tumor presents to the touch a sense of hardness, while around its periphery are felt hard nodules.

Epithelioma may be found in the region of the lips, tongue, cheek, the nose, forehead and scalp.

Epithelioma makes its appearance on the lips as a simple crack or fissure, or as a slight warty excrescence. As it continues to grow the warty character becomes more marked, the surface of the mass becomes chapped or fissured, from which exudes a thin, watery ichorous or sanious pus, irritating the surrounding structures sufficiently to cause them to break down.

When the breaking down process takes place the destruction of tissue never ceases; no tissue is excepted, bone, muscle, fascia, cartilage are all involved and destroyed by the process; pain is present as a prominent feature, which is of a darting, shooting, lancinating, or even of a neuralgic character.

When ulceration involves blood-vessels hemorrhage occasionally occurs, and may be free enough to cause serious complications when coupled with the natural debility induced by the disease.

Lymphatic enlargement is not, as a rule, an early symptom, though this may occur. Usually a period from eight months to a year elapses before this takes place. In cancer of the lips, the glands at the angles of the jaw are liable to become involved first. There is always constitutional evidence of the trouble, which is late in making its appearance though quite as fatal.

Epithelial tumors are usually of slow growth. Several cases have been reported to have existed ten, eighteen, and twenty-two years from their first appearance to the time of operation for their removal.

The diagnostic points in brief are: At the outset the presence of a cracked or chapped lip, or small shot-like, or warty tumor, just beneath the mucous membrane. The lip feels stiff, and hard, and painful, and as the disease progresses the part becomes more rigid, breaking down at several points, from which is discharged a thin ichorous or sanious pus, accompanied with darting, aching, or burning pain. Later, the surrounding structures, gums, jaw bone, and lymphatic glands are involved, and the teeth may drop out. The countenance becomes livid and cadaveric, rapid emaciation follows, death occurring usually in from eight to eighteen months.

The etiology of this form of growth is still shrouded in mystery. In early times the clay pipe was thought to be an exciting cause, but cancer as often was found in people that were entirely free from the tobacco habit. It is often found associated with some form of constant and continued irritation.

When the diagnosis is established, a complete excision of the growth should be advocated. If seen in the early stage, before much tissue is involved the operation is very simple. A V-shaped incision is made well beyond the area of induration, as soon as the incision is made and the growth removed, an assistant grasps the cut ends of the lips to prevent bleeding; two or three hairlip pins are introduced, the cut surfaces approximated and held in position by turns of the figure of eight ligatures wound around the pins; the line of incision is painted with ten per cent iodoform in collodion; the ends of the pins are cut short, and a strap of adhesive plaster carried around on both sides for some distance, to take the strain from the hairlip pins and reduce the tendency to cutting of the sutures.

This operation, to be successful, must be performed under strict antiseptic precautions. The pins should not be removed for four or five days, when primary union will be found to have taken place. To remove the pins the figure of eight turns of the ligature are cut; the line of incision is supported with the fingers of one hand, while with the other the pin is gently rotated till entirely free; it can then be removed. The wound should be again painted with the iodoform collodion solution, and the adhesive strap re-applied for four or five days longer.

Should the growth involve a greater area than can be conveniently closed by the V-shaped incision, the angle of the mouth may have to be extended latterly by cracking open the cheek till the tension on the suture is removed to a great extent, or a flap should be slipped up from the chin to fill the gap.

#### EPITHELIOMA OF THE CHEEK.

Epithelioma of the cheek first makes its appearance as an enlargement of the papillæ of the skin or a scaly patch, then an area of hypertrophy becomes manifest. As the progress of the disease continues, the surface of the indurated mass takes on a degenerative process, *viz.*, ulceration. The ulcerated surface is bathed in an ichorous pus, which, on drying, forms a crust (as seen in Fig. xlviii, plate N). The border of the ulcer has a punched out appearance when the crust or scab is removed, and has a clearly defined

outline. As the destructive process continues, the tissue underlying it, superficial and deep, become involved; later the superparotid and anterior chain of glands in the neck become involved. The pain is usually more pronounced and continuous than in cancer of the lip, increasing with the progress of the growth as it involves a greater area.

The treatment resorted to should be radical; this, of course, meaning extirpation of the growth with the knife. The authors believe that in using the various caustic pastes recommended by some surgeons, is simply adding fuel to the fire, and therefore more harmful than beneficial; while it is true it will cause the exfoliation of a slough, it will cause new vigor and a rapid return generally. It is a well known fact that any irritant applied to cancer will increase its size very rapidly.

Early removal of skin cancers, before a large area is involved, is less likely to be followed by disfigurement; when the invaded area is large, a plastic operation may be necessary to close the space left after the removal of the growth.

#### EPITHELIOMA OF THE TONGUE.

Cancer of the tongue has been described indiscriminately, both as schirrus and squamous, though it has been definitely decided that all cancers of the tongue are of the epithelial variety. Cancer of the tongue usually makes its appearance at about the 40th year, and is more commonly found in the male sex. Its origin may be determined in many ways. A frequent cause for the development of cancer of the tongue may be some dental malformation or caries of one or more teeth with jagged and sharp edges, with which the tongue is constantly brought into contact. This is well illustrated in plate N, Figs. xli and xlii. The disease is found most usually located near the center of the tongue, between the mesial line and its border, and is found at its inception either as a small shot-like body, a villous projection or chap or fissure. Any of these forms gradually spread, become indurated (Fig. xl, plate N) finally breaking down and forming an excavated foul ulcer with clearly defined and ragged edges and prominent borders. The stiffness complained of in cancer of the lip is likewise found here, and the entire tongue may be so infiltrated as to be immovable; pain is complained of at all times, which increases as night approaches. The pain diffuses and radiates from the local cause, and it may at times produce neuralgic pains.

When the growth has existed for a considerable time, it may

fill the entire cavity of the mouth, and seriously interfere with both mastication and deglutition. A cancerous tongue has been seen to entirely fill the mouth and protrude beyond its limits.

Cancerous cachexia or bronzing of the skin is an early symptom in epithelioma of the tongue; lymphatic involvement takes place first at the angle of the jaw, and then the general lymphatic supply of the anterior portion of the neck.

The diagnosis of epithelioma is seldom mistaken, the onset gradual but continued, if anything aggravated by treatment. The characteristic ulceration, the attending pain, the age of the patient, lymphatic involvement, the cachexia present, and general debility will stamp it at once as a malignant epitheliomatous condition.

The various operations devised for the partial or complete removal of the tongue offer but little encouragement in the prognosis as to the ultimate outcome of the case. The operations practiced at the present time are Whitehead's, Symes', Kocher's and the ecraseur. The advantage the Whitehead operation holds over the ecraseur is a clean incision carried across the tongue, well behind the seat of the growth, whereas the ecraseur, no matter how well the pins are introduced, will slip up on tightening, and the ecraseur with the pins, are forced nearer the ulcerating mass, and therefore a greater likelihood exists in permitting some unsound tissue to remain. Again, the incision in the Whitehead is a clean division, the ecraseur making a contused pulplified mass for a strump, and liable to undergo extensive gangrenous inflammation, and result in the death of the patient, as was seen in one case by the authors.

In the Whitehead operation the anesthetic must be in the hands of a trusted assistant, as there is often great embarrassment to respiration. The patient must be thoroughly under the effect of the anesthetic before the operation can be proceeded with. Two reliable assistants are absolutely necessary, and these must be familiar with each step of the operation. Plenty of small sponges, fastened to stick, should be at hand, and immersed in ten per cent boric acid solution.

The instruments necessary are scissors, a pair of clamp forceps, a Spencer Well forceps, a needle holder, a straight bistoury, a straight needle threaded with stout silk, and two strong silk ligatures.

If a good light cannot be secured a head mirror should be employed, with reflected light from a lamp, to thoroughly expose the field of operation. A gag is introduced into angle of the mouth

to the opposite side of the growth; the tongue is then transfixed with the needle carrying the silk, which is tied into a long loop, for the purpose of drawing the tongue out; the surgeon then splits the tongue down the median line with a sharp pointed bistoury from a point well behind the growth, this enables the surgeon to remove one-half of the tongue at a time, and control the bleeding from that side before attacking the other half.

As soon as one-half of the tongue is removed, the bleeding lingual artery is grasped with an artery forceps and ligated with one of the silk ligatures, thus practically controlling all hemorrhage from that half of the stump; the same manœuvre is carried out on the opposite side. If the frenum of the tongue is involved, two of the incisors should be extracted for the purpose of ready access; if this is not done free bleeding may occur and delay the operation, and possibly prevent a clean removal of the entire mass.

In cutting across the stump Jacobson recommends first cutting a trough down through the tongue till the lingual artery is exposed, when it can be more easily secured than if the stump had been entirely severed and its corresponding portion removed.

When the disease lies far back at the root of the tongue, it may be necessary to slit up the cheek, this will give an excellent exposure of the part; but it should be avoided, if possible, as the cicatrix in the cheek is quite unsightly, even if primary union takes place.

Symes' operation is applicable to those cases when the entire floor of the mouth is involved. It is an operation of greater magnitude than is the Whitehead, and consists in the division of the lower jaw at the symphysis menti. The whole tongue and floor of the mouth are then excised with the scissors and partly with the ecraseur.

The objection to this operation is the length of time for union to take place in the bony part.

Kocher's method is equally as severe an operation as the Symes'. In this method an incision is made from the symphysis to the hyoid bone, following the boundary of the submaxillary triangle along the border of the digastric muscle to its intersection with the sterno-cleido mastoid muscle, from which point it is carried to the mastoid process; the skin, platysma muscle, and fascia are dissected up together and the facial artery ligated. The submaxillary triangle is next cleaned out and the lingual artery secured. An incision into the mylo-hyoid muscle exposes the mouth. The opening in the mylo-hyoid should be enlarged to give room for manipulation;



the tongue is drawn through the wound and divided with successive cuts of the scissors. The lingual artery of the opposite side is secured if the entire tongue is to be removed.

A preliminary tracheotomy should precede this operation to render it thoroughly aseptic, likewise to avoid the possibility to septic broncho-pneumonia.

To remove a tongue, the seat of an epithelial growth, with the ecraseur, a stitch should be passed through the tongue, as in the Whitehead operation; the tongue drawn out well, two slightly curved needles on handles are passed through the tongue so as to transfix it well behind the growth; immediately back of the pins a shallow gutter is cut into the tongue for the reception of the loop of the ecraseur, which is passed behind the needles and slowly tightened until resistance is met with, when the screw should not be turned more than half a revolution a minute. This, however, is an unsurgical measure, and the authors would not recommend it when a simple operation, like the Whitehead, fulfils all the indications.

The after treatment in all these cases consists in keeping the wound in an aseptic condition; mouth washes of peroxid hydrogen and boric acid or phenol sodique should be employed frequently for this purpose. A solution of iodoform in ether may be painted over the wound. Morphin should be administered if pain is present.

The diet for the first forty-eight hours should be milk with a little brandy, administered through a catheter passed from the nose into the pharynx, or by nutritious enemata. If possible, the patient should be encouraged to sit up a little in bed on the second day. Eggs, arrow root and vegetable broths are added to the milk diet as soon as possible.

#### SARCOMA.

Skin sarcoma sometimes involves the face, and is usually of the hemorrhagic type. In contradistinction to epithelioma it is a tumor of rapid growth, occurring much earlier in life, and running a more rapid course. It gives metastasis by direct communication with the vascular system, and therefore lymphatic enlargement is not seen in this condition.

The points of differential diagnosis are:

#### EPITHELIOMA.

1. Occurs in elderly people after the age of forty.
2. A tumor of slow growth.
3. Lymphatic involvement.

#### SARCOMA.

1. Occurs before the age of thirty-five.
2. A tumor of rapid growth.
3. Lymphatics not involved.

## EPITHELIOMA.

4. More painful at night.
5. Does not always recur after removal.
6. Cachexia.

## SARCOMA.

4. Continuous pain.
5. Always recurs after excision.
6. No cachexia.

Fig. xlv, plate N, shows a skin sarcoma prior to ulceration.

*(To be continued.)*

## DENTITION AND CHILDREN'S DISEASES.

During five years Dr. Séjournet practiced in a locality of 4,000 inhabitants, where the number of births averaged 120, and where he noted his observations from day to day on all the little patients below two years, not basing his opinion on that of the parents, for whom the teeth are the cause in almost all the infantile affections.

The French doctor collected 737 observations of children's diseases, and only in 72 did he note either coincidence or relation, more or less direct, between dentition and the diseases. Of these 72 little patients, 8 were raised at the breast; 14, though taking the breast, were eating a little of everything; 20 were fed on the bottle; 28 were weaned and fed mostly without rules; 9 were weaned prematurely and ate at their discretion.

Now, some children seemed to make teeth when they fell sick, for their gums were inflamed, red, more or less firm, and hard. It were possible to think that dentition was the cause; but having followed the children after their cure, he found that it was not so, as the teeth appeared much later, when none thought of them. Analogous cases were observed in many other instances of gastric disturbances.

In another group of cases, Dr. Séjournet combined the observations on dental eruptions in the course of infectious diseases resulting from febrile conditions. In these cases there are no dental influences on the apparition of the disease; on the contrary, it seems that the febrile state has provoked the eruption at a somewhat precocious epoch.

Only in 7 cases was the author justified in ascribing to dentition certain indispositions and light incidents or simple maladies, which mostly were allayed by the incision of the gums. So that, after all, Dr. Séjournet, while admitting that dentition is not the real cause of diseases of childhood, testifies that sometimes, in subjects best nourished and best cared for, there is an undeniable influence properly belonging to it.

## MISSISSIPPI DENTAL ASSOCIATION, 1893.

The salient points reported for the ITEMS OF INTEREST.

*Mrs. J. M. Walker.*

## INCIDENTS IN OFFICE PRACTICE.

Dr. Moffat asked the opinion of the Society in regard to a second bicuspid, which was very badly decayed on the posterior proximal surface, the cavity running up under the gum, the nerve exposed and bleeding. The patient, a young lady not sixteen years of age; the other teeth all in good condition. He had devitalized and removed the pulp, filled the root, and inserted a temporary filling of oxyphosphate to await his return from the Association.

The parents would not be satisfied with anything but gold for permanent work. Would it be advisable to extract the tooth, trusting that the gap would close, or could such a frail tooth be safely filled with gold?

In the discussion of this question the following alternatives were offered:

*First.*—Retain the oxyphosphate filling, watching it closely for renewal or repairs if you have the patient under control.

*Second.*—If the patient desires gold work, retain the cement filling, and protect with an all-gold crown passing under the gum at the decayed margin.

*Third.*—Cut off the crown and place a Richmond crown. In regard to extracting the tooth, it was considered that the gap would probably close, unless the adjoining teeth were held firmly in position through an occlusion. But in closing, the anterior teeth would swing around toward the gap, giving an unpleasant expression of countenance.

Should the oxyphosphate filling be replaced with amalgam before putting on a gold crown, Dr. Morgan thought the mercury in the alloy would attack the gold and weaken it, unless the crown were lined with cement. In reply to this opinion cases were cited of satisfactory repairs to imperfect gold filling, made by patching with amalgam.

Dr. T. C. West related the history of a case, the patient, a lady twenty-three or twenty-four years old, whose teeth up to the last eighteen months had all been in good order. At that time she first began to notice a slight overlapping of the central incisors. The irregularity was so slight that nothing was done for it, but six months later the overlapping was much more pronounced, and one

of the teeth devitalized. In the removal of the dead nerve a large open foramen was found, the root being very short as though absorbed. He filled the root canal, but the overlapping continues to increase.

Dr. Morgan said he had a similar case. In making an application of arsenic, he reached living tissue a quarter of an inch from the crown.

Dr. West, because of recession of the gums, had removed the upper central incisors for a patient fifty years old. He found the roots were not more than a quarter of an inch long, though well rounded at the apex, with living pulps.

At the night session Prof. Francis Peabody read an essay on

#### THE CONSERVATIVE TREATMENT OF TEETH BY THE GOLD PROCESS.

He spoke of the supremacy in which gold is held as a filling material, but deprecated its use in teeth of a soft character or those attacked by white decay. Neither would he use gold when the adjustment of the rubber-dam is very difficult, or when the length of time necessary to properly fill the cavity is to overtax the patient's strength, tempting us to hurry or slight our work, or in proximal cavities in the posterior teeth when it is difficult to gain proper access.

In such cases, he asked, is not a perfect filling made from a baser material better than an imperfect filling of the best material? He spoke of the therapeutic qualities of tin at the gingival margins, and its great value where it does not have to bear the friction of attrition or mastication. A judicious choice between various methods may often save us from failures and mortification. Dr. Peabody made the claim that soft or non-cohesive foil has more saving properties, when introduced into a cavity in a tooth, than gold of a cohesive character. While cohesive foil can accomplish that which cannot be done in any other way, in some places, yet it is less kindly received by the enamel and denture being less in harmony with tooth structure.

He spoke of the different mechanical principles on which non-cohesive gold depends in its use as a filling material—as wedging, dovetailing, interlocking, etc., and claimed that cohesive foil is less tractable, less easily brought into contact with the walls of a cavity. For soft foil no pits or retaining points are necessary, and it more perfectly fits the cavity, keeping out moisture and microbes, thus preventing recurrence of decay at the margins of the cavity. A filling of cohesive foil may remain in the cavity with more certainty,

but the soft foil filling will be more conservative, and can be introduced in less than half the time. Cohesive foil will save the teeth, but it requires a greater degree of patience, a larger expenditure of time, and more prolonged physical exhaustion.

Gold fillings fail either because of lack of judgment as to where gold should be used, or from lack of skill in using it. Gold must be so manipulated that it will never, under pressure, draw away from the margins of the cavity. This is accomplished by always keeping the filling higher in the center than at the edges. Then force exerted on the surface will drive it to the walls, while if lower in the center downward pressure tends to make it spring away from the sides. Another advantage possessed by non-cohesive gold is that where it is impossible to keep the cavity and the material dry, this form of gold can still be successfully used in the shape of cylinders and preserve the tooth, where cohesive gold could not be used at all. The alloys are of unquestionable value as conservers of tooth substance if properly used, though there is much yet to be learned as to the best way of using them, and a great diversity of opinion on the subject. One says as dry as possible; almost a powder—another says introduce it very soft.

Before the day of alloys or amalgams there was no known way of saving badly broken down teeth. To-day the merest shells are made serviceable, thanks to amalgam. An eclectic practice will make us more liberal in our views and secure to our patients better services.

In the discussion of this paper Dr. Crenshaw, Atlanta, Ga., said: While conservative and correct in many of its positions, the paper is, as a whole, a sort of indirect attack on the use of cohesive gold. A large proportion of cavities can be perfectly filled only with cohesive gold. Soft, chalky teeth should not be filled with gold; I believe there is some therapeutic action where tin is put against the walls of such teeth. The amalgam alloys are indispensable. I believe with Dr. Flagg, that, in proportion as teeth need to be saved, gold is the poorest material for them. In all posterior cavities I would use amalgam properly manipulated. The cements are good only for temporary work.

Dr. Morgan disagreed with the writer, and the preceding speaker, as to the use of gold in soft, chalky teeth. He said, I never hesitate to use soft gold in soft teeth. Last week I could have shown you, in my office, gold fillings in the proximate surfaces of teeth in the mouth of a lady, now fifty years of age, that were put in when she was fifteen years old, when the teeth were very soft. They are

now good teeth. Forty years ago I separated and filled cavities on the proximate surfaces of teeth for children not ten years of age that are to-day good teeth. Failure is not the result of want of harmony or of incompatibility; the fault lies in manipulation. He who uses non-cohesive gold will have a larger proportion of success than he who uses cohesive gold. Failures are frequently due to the manner of introducing gold into a cavity, and also to the manner of shaping the cavity, especially in the proximal surfaces of molars and bicuspid. Thin flanges break down more readily than rounded surfaces. Deep undercuts, cutting across the tubuli destroy the vitality of the cut off portions, and they disintegrate and crumble away. I have never accepted the theory that tin in contact with tooth substance has any therapeutic value. It is soft and easily adapted to the margins of cavities, hence its value, yet fillings of tin do fail at the cervical margins. It is not true that it is necessary to keep cavity and gold absolutely dry. If the mouth is moderately healthy there is no disintegrating quality in the oral fluids, and they will do no harm.

Neither is it necessary that the whole body of the filling should be dense and hard. In the large gold fillings of the "old masters," though the surface was thoroughly compacted, the interior and the bottom was often so soft that the point of a pencil would penetrate the mass, if the wall of the cavity was broken, or as tested on removal of those teeth, after they had been perfectly preserved for many years. In cavities with thin walls, especially in the bicuspid, if a large filling is made very dense and solid, the unequal expansion of metal and tooth substance may split the tooth in two.

Dr. George W. Remburt, Natchez, does not agree with the last speaker as to the effects of cutting across the tubuli. He does not believe that gold fillings fail any worse in dead than in living teeth.

Dr. Peabody, in closing this discussion, illustrated many points in his paper as to the proper shaping of cavities, methods of introducing various filling materials, etc., by off-hand drawings on the blackboard without a reproduction of which much of this part of the discussion would not be comprehensible. He said that his experience with gold in soft, chalky teeth had not been that of Dr. Morgan. Where the teeth are of that character which is attacked by white decay, gold will not save them, nor will anything but the phosphates. The baser metals harmonize better with teeth of poor structure than gold. Tin is best in proximal cavities. It neutralizes acids, and thus prevents decay. Where there is no attrition decay will not recur under tin, as it will under gold, no

matter by whom inserted. In the old style of filling, where two-thirds of the tooth were cut away to save the other third, making the tooth a V-shape, gold might answer, but to-day we use a separator, and so shape our fillings as to leave the natural interdental space, and the teeth come together again normally, except that we have substituted indestructible gold at the point of contact.

You hear men say that a tooth without a pulp is as good as ever, after the pulp has done its work. The work of the pulp is never done, and the vitality of a tooth should be preserved as long as possible. Many of the fillings, made forty years ago, before cohesive gold was known, are better than any that can be made now, though the surface was flat, and not contoured, as is done to-day. In regard to the amount of mercury to be used in amalgamating alloys, it is claimed by some that if an undue amount of mercury is used we get a solution of tin, and on squeezing it out the original constituents are changed. My own experience has taught me to put in just enough mercury to have a plastic mass, and not have any to squeeze out. It is then in a better condition than if too soft, or if in powdery condition.

(*To be continued.*)

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## ALABAMA DENTAL ASSOCIATION.

Salient points reported for ITEMS OF INTEREST.

*Mrs. J. M. Walker.*

[CONCLUDED FROM PAGE 397.]

### IN THE DISCUSSION OF PATHOLOGY AND SURGERY

Dr. L. G. Noel gave the history of a case of diseased antrum, with an abscess over the bicuspid roots, from constitutional vice; the bones were all affected, a portion of the septum nasi having been lost. After a long course of treatment she was dismissed as cured, but shortly after the patient fell down stairs and fractured the lower jaw. An interdental split was adjusted, but it is considered improbable that she will ever recover from the impairment of the osseous system, and exsection of a portion of the lower jaw may be necessary.

Dr. J. Y. Crawford, deprecated overtreatment of the antrum, being especially emphatic in the reiteration of *let it alone*, after drainage is secured and a condition of comparative comfort reached.

Dr. W. G. Browne gave the history of an interesting case, in which an accident, knocking out the deciduous teeth, resulted in diseased tissues, and the eruption of badly decayed, permanent incisors. These were early lost, the roots never being completely formed. At the age of fourteen years, Dr. Browne is about to insert a bridge, carrying the incisors.

Dr. George Eubank had a case in which, by a kick from a horse, a section of the lower jaw, carrying the six anterior teeth was broken at both ends, and driven back in the mouth half an inch. A jack-screw was inserted between the bicuspid, driving them apart, till the broken piece was put in position, when it remained firmly in place without any splint.

Dr. Browne had a case in which the jaw was broken at the ramus. After this had healed the wisdom tooth erupted, pointing into the soft tissues of the cheek. Every effort was made to extract it, both by Dr. Browne and by several other dentists, but it could not be budged. Dr. Browne thought it would be necessary to saw it out.

Dr. C. N. Rosser, Atlanta, Ga., had a case with an abscess on the buccal side of a second bicuspid, which had been devitalized, and the root filled "by some other man." When lanced there was a free discharge of pus. After an absence from town of some six months on the part of Dr. Rosser, the young lady returned, the bicuspid having in the meantime been extracted by advice of her physician, and the abscess lanced again, but on the palatine surface. This opening had not healed, and on examination he found another opening an inch back, at the junction of the hard and soft palate. Water or medicine syringed into one opening came out from the other. There was considerable necrosed bone, a piece the size of the thumb nail, and four other smaller pieces being removed. It healed in about thirty days after the last operation, with a slight thickening of the membrane from front to rear.

Dr. R. C. Young, spoke of the great value of pyrozone, which he said "acts like magic." Dr. Young has had a case under treatment—the patient, a child eight years old, presenting with a fistulous opening over both deciduous canines, though both were perfectly sound, as were all the other teeth.

The permanent cuspid was plainly perceptible just above the deciduous tooth, and erupted immediately after the extraction of the former. The other deciduous canine was also extracted. Both had live, healthy nerves—there was evidently necrosed bone between the two openings; syringed water, and the probe, passed freely from one to the other, either way.



He was desirous of expression of opinion as to the probable cause of the necrosis and fistulas, all the teeth being sound. The deciduous roots were not absorbed.

Dr. J. Y. Crawford said there is no question but that necrotic action was superinduced by pus burrowing from one point to the other. The primary cause was doubtless the migration of the permanent tooth from a proper to an improper position, irritation from the pressure on the unabsorbed deciduous root causing the inflammation and abscess. Absorption of the roots of the deciduous teeth is an extraordinary though physiological function, and any extraordinary function is more susceptible than those which run *pari passu* with existence. Interference with the normal surroundings of a deciduous tooth may cause the arrest of absorption.

Dr. Foster: Would you expect absorption of the root of a cuspid at that age?

Dr. Crawford: At nine years of age considerable absorption would not be abnormal. There is no other rational conclusion in this case but that the cause was the migration and premature eruption of the permanent cuspid, traumatic action resulting in the sinus.

Dr. E. S. Chisholm gave the history of a very interesting case. The patient was a child of two years of age, of so decided hemorrhagic diathesis that the slightest scratch was a source of grave anxiety. In running about with a pencil in her mouth the child fell, lacerating the roof of the mouth. For four days every effort had been made by two prominent physicians to arrest the hemorrhage, even to applying the galvanic cautery. They gave the child up to die, as it was vomiting blood, and the system so depleted from loss of blood that they pronounced recovery impossible, even were the hemorrhage checked. Dr. Chisholm was called in by the father to see the child, it occurring to the parents that he so often had occasion to check hemorrhage from the extraction of teeth, etc. He found the child lying in the mother's lap, its death hourly expected. He at once went to work and constructed an appliance of wire to retain a compress in position. He passed a wire around the lateral incisors, throwing out a loop extending beyond the point of laceration, attaching to this a wire passing across from the first molars just erupted, and cutting retaining grooves in the teeth. This served to retain in position a soft compress of lint, saturated with Monsel's solution—sulphate of iron. The first application stopped the flow of blood, and proved an entire success, the child rallying promptly. On the fifth day it

came loose, and while it was being readjusted a physician passed by. The father called to him—being a friend of the family—to come in and see what the dentist had done, and how he had saved the life of their child. But he passed on, saying, “Oh! it would have got well anyhow!”

On another occasion a lady patient brought in her little boy of nine years old, saying that the doctor had ordered all his teeth taken out. The following dialogue ensued :

“I cannot do that.”

“Oh! but you must do it; the doctor says it must be done.”

“But let me examine his mouth first, before we decide on anything.”

“Oh! that will make no difference. You must take them all out, or I shall go somewhere else.”

“Very well, you will have to do that; but let me look at his mouth; there does not seem to be much of anything the matter with it. Who is your physician? How long has he been practicing?”

“He is a very nice young man who graduated about two years ago.”

“Well, Mrs. ———, I have been practicing thirty years. My specialty is the teeth, and for twenty-five years I have been studying the teeth of children. Your physician graduated two years ago. He has had no experience in regard to the teeth. Do you place his judgment against mine in such a case as this?”

She laughed, and admitted that she had never looked at it in that light. She simply thought that whatever the doctor said had to be done.

Several cases of so-called cancer cured by proper attention to the teeth, were related, the “cancers” proving to be a broken piece of tooth, an abscess from a dead tooth, or from an imbedded wisdom tooth.

A striking case of malpractice was related by Dr. Merrill. An old gentleman having an abscess from a decayed wisdom tooth, was treated by two physicians successively for “a boil” on the cheek, hot poultices being applied to the outside and the face lanced on the cheek and under the jaw. The discharge continuing for weeks, he grew seriously ill, and being confined to the house he sent for a younger physician who lived nearer by. The latter at once pronounced the wisdom tooth the cause of all the trouble, and ordered him to the dentist to have it removed. At that time he could scarcely open his mouth enough to pass a finger between his front

teeth, and was completely run down from lack of nourishment and the drain on his system. He had not been out of the house for ten weeks and it was several months before he recovered his usual health. But the removal of the wisdom tooth cured him.

The subject of

#### PYORRHEA ALVEOLARIS

was discussed at considerable length. Dr. Temple uses escharotics, especially "Robinson's Remedy," but when the teeth are so loose they can be lifted in the socket, he thinks it preferable to remove them, as they are only a source of continual irritation.

Dr. R. C. Young commends the use of pyrozone in the treatment of this disease. When there are accumulations of sanguinary calculus he does not consider it amenable to local treatment.

Dr. R. R. Freeman spoke of the importance of securing the coöperation of the patient, having him rub the swollen gums thoroughly with a corner of the towel wrapped around the finger, and packing in chalk between his teeth at night. Cleanliness is half the battle.

When a patient comes, for the first time, with the mouth in a condition showing utter ignorance of the use of the tooth-brush, and you feel that you do not want to operate on that mouth for any fee, yet have to be suave and smiling, give him instructions for thoroughly cleansing the mouth night and morning, and put him off for a week, and you will be so astonished at the change in conditions that you will not recognize the mouth, but will have to look in your book for the object of the appointment.

Dr. Freeman retains very loose teeth in position by ligating them with fine binding wire to the firmer adjacent teeth, passing the wire in and out and around the teeth till they are held firmly in position. They can thus be rendered serviceable for years.

Dr. Turney gave the treatment of a case which he had finally abandoned as hopeless, nothing availing to arrest the suppuration.

Dr. W. G. Browne has had most favorable results in two recent cases, in which, the patients being traveling men, he had, after thorough removal of all deposits, furnished each with a syringe and vial of peroxid of hydrogen with instructions for use to insure thorough cleanliness. After absence varying from thirty days in one case to sixty in the other, he had been thoroughly astonished at the favorable results.

Dr. J. Y. Crawford emphasized the statement that we don't cure disease; we bind up the parts, and nature works the cure. This is strikingly illustrated in the so-called pyorrhea alveolaris.

The tissues involved are not inclined to reproduce themselves; the gum tissue is semi-cartilaginous, and does not respond to treatment; the alveolar process does not reproduce itself, especially in patients who have reached maturity. Seek after palliative treatment. You will get along better if you do not force your surgery too far at first. If salivary and sanguinary calculus have not done their work too thoroughly, you may be able to assist nature by eliminating causes, and mechanically tighten the teeth. You may even cure isolated spots, but we must work on the expectant plan—no stereotyped mode of procedure will answer; we must meet indications as they arise; mitigate conditions. It is a self-limited disease if the patient has vitality to withstand the onslaught. It is a law, that universally holds good, that we can cure nothing but that which has a tendency to cure itself—is self-limited. This gives us new hope, as we better understand constitutional conditions, that we may be able to afford relief through proper treatment. It is not *per se* local; there is an aggravated condition of the secretions from constitutional impression. As to the cause, there is a long list of influences and factors which lead up to and produce it, which we do not understand. I believe that a most potent factor is mal-occlusion of the teeth. Another most potent factor dates away back in the history of the individual. Suppose a child whose baby molars decay at three, four, five years of age. The surroundings are in a state of violent inflammation, while the permanent teeth are in the stage of upbuilding and growth. By virtue of long-continued inflammation, the bone around the permanent teeth is destroyed by necrosis, resulting in a disarrangement of the teeth. In the healing of the soft tissues cicatricial tissue forms, interfering with the eruption of the permanent teeth, with consequent irregularity, mal-occlusion, and pyorrhea alveolaris.

Dr. C. L. Boyd believes that the disease is purely local, neither mal-position nor mal-occlusion being concerned in its production; that it is due to lack of cleanliness and lack of proper exercise of the surrounding tissues, encouraging them to grow out of the jaw a sufficient length to give them space. The gums around the teeth should be rubbed thoroughly twice a day, and children early taught this habit, thus stimulating the tissues and developing the maxillary, so as to give the upper teeth ample room, allowing the lower teeth to go inside without being crowded and jammed together. Exercise is as necessary for the gums and the bony tissues around the teeth as for other portions of the body. Give children such food as requires exercise in mastication. This will develop the

jaw and make the teeth healthy and strong; enforce strict cleanliness of the mouth and teeth. In this way only can we avoid the direct causes of decay and pyorrhea alveolaris.

Dr. Crawford said that the ideal mode of cleaning the mouth and teeth would be by a hose attached to the hydrant, throwing water with considerable force. This would be especially good for crown- and bridge-work. Have the water as pure and clean as for baptism.

Dr. R. C. Young: The worst cases of pyorrhea alveolaris are those where there are no deposits of calculus. It is never cured by the dentist. It sometimes gets well, but not till after the teeth are lost. It is a local manifestation of systemic disease. After the socket has been lost, it is not reproduced, any more than an arm. In genuine pyorrhea alveolaris, the roots of the teeth are more than usually polished and glistening, but they are all loose, with pus oozing from around them. The disease is contagious, and may be transferred by the dentist's instruments. I believe that chewing gum, indulged in in the privacy of the bedchamber, as is the case with cleaning the teeth, gives beneficial exercise to the gums and teeth.

Dr. E. S. Chisholm agreed with Dr. Young that calculus is not a necessary feature of the disease, which he defines as a local expression of constitutional disease or vice. We can mitigate it, hold it in check; but we cannot cure it.

Dr. Boyd thinks that neglect of cleanliness, permitting accumulations of tartar on the teeth, would tend to develop constitutional tendency to the disease, and that, therefore, practically, it is due to accumulations of calculus, the development of the tendency being prevented by avoiding known irritants.

Dr. Wm. Crenshaw said that in his own experience he had not found mal-occlusion a factor in producing pyorrhea; on the contrary, some of the worst cases he had known had the teeth in perfect occlusion. His own teeth, for instance, and his father's, were regular, yet both are victims of pericementitis. As a mouth wash, he uses bichlorid of mercury, 1 to 1,600, or 4 grains to the fluid pound. He considers this perfectly safe—that a teaspoonful can be swallowed with impunity. This solution of bichlorid of mercury used on the tooth-brush will kill the tendency to pyorrhea alveolaris. Absolute cleanliness is the only treatment of any avail. Go into the pockets and break them up thoroughly, and rinse them out with a strong germicide. The teeth will be stronger and firmer, for awhile at least. Whether a permanent cure can be effected,

he was not prepared to say. It is a dread disease attacking the strongest and best teeth, in the strongest constitutions, causing the loss of the soundest teeth.

Dr. Chisholm is satisfied that the disease is hereditary. The deposit in true pyorrhea is at the end of the root, a secretion from the devitalized tissues around the apex, though this is not an unvarying or essential feature.

Dr. L. G. Noel, Nashville, Tenn., regards lowered vitality as the most potent factor in the production of this disease. There is no cure where there is an impoverished condition of the blood, except by the removal of the teeth; but by taking out the first one affected, we can retard its development. In the treatment of pus pockets, after the surgical operation, use Lugol's solution of iodine, peroxide of hydrogen and bichloride of mercury.

Dr. Crawford criticised Dr. Crenshaw's statement regarding the internal use of bichloride of mercury, in the strength given—1 in 1,600—saying, "surgeons never use it stronger than 1 to 3,000 in wounds." He thought that if it was so positively hereditary, as claimed, that we would see it in children with the deciduous teeth. But there is never mal-occlusion there, and never pyorrhea alveolaris.

He said that he had reached his conclusions after twenty-five years of close observation. He took exception to the statement that children do not have tartar on the teeth; they do have soft, cheesy tartar, and they have soft chalky teeth that decay early, and are lost prematurely, resulting in distorted, diseased permanent teeth, with mal-occlusion and pyorrhea alveolaris. Disease is not inherited, but a susceptibility, or tendency, to it—it is called a diathesis of the blood.

Dr. R. R. Freeman, Nashville, Tenn., said he thought that something more than irrigation with clear water was necessary to insure cleanliness of the oral cavity. Mechanical manipulation and soap are as necessary here as to the washerwoman, or in cleansing the hands. Even if it be true, that we cannot cure pyorrhea, we can use palliative measures, carrying them along, by care and cleaning, in comparative comfort for many years, perhaps. Don't take the teeth out, give them a chance. There is some relief in the mere hope that they may get better. Do not destroy the teeth, except as the very last resort.

Dr. C. L. Boyd said that his teeth offered a striking example of mal-occlusion; but that he has no accumulation of tartar, and no predisposition to pyorrhea had as yet made itself apparent.

Dr. W. G. Browne gave an instance of apparent cure of a very clear, typical case of pyorrhea, with no tartar. The tooth affected was a lower incisor. It was treated eight years ago, and remains in position to-day clearly cured.

The molars in the same mouth have since been attacked, but there has been no recurrence of the disease in the tooth treated eight years ago. It was a case of extreme looseness with exudation of pus.

Dr. L. G. Noel: Pyorrhea alveolaris is a disease of adolescence, pointing to lowered vitality. Children do not have it, because, when the alveolar process is forming, the bones are in active life; there is a high vascularity of the tissues; rich blood is being poured in. Pyorrhea begins after the system has entered on its downward career; many cases occur just before death, whatever the disease.

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### ONLY A DREAM.

I am nothin' but a poor, ignorant country dentist, but have been workin' at the trade for nigh on to twenty-five years. I have tried to do my best for all the people that have had me work for them, and I don't know as I have done what was best every time, but I do know that I have never done what I knew was wrong. Some time ago I got a notis of a meetin' where a lot of dentists were to meet and discus different pints in our trade. It was the first I had ever got, and I took it home to show to Sarah (she's my wife). We talked it over, and she finally said to me, "Why, Thomas, it says it wants you to come." I hadn't thot that it ment me in 'ticular, but when I came to read it over carefully I saw it said Dear Dr. we would be pleased to have you come. Well, Sarah and me talked it over every day, till it was nearly time to go. To tell the truth she did not like to have me go so far away without her; but she finally consented, and the day before the meetin' was called she had my valise all ready for me to go. I got on the cars, and in due time the man called out the city where I was to get off. The directions said that they were to meet at a certain tavern. When I got off the train and was agoing out the depot a man says to me, "Hotel, sir?" I said yes, and told him where I wanted to go and what there was to be there. He opened a door to a two-wheeled cart. I got in and he drove me to the place. He charged me fifty cents for it. If ever I get hold of a tooth in that

man's mouth; but may the good Lord forgive me for my evil thots. Right here I might tell you how I had to pay for even ice water. Had to give a grinnin' niger money for somethin' to eat. How they slid me in a box to carry me to my bedroom. How I had to pay \$5.00 a day for my board. It would take a large book to tell it all, so I will proceed to the meetin' part. The next mornin' I waited round till I was tired for that meetin' to commence, and not seeing any signs of it I asked a man, and he says, "Come with me, I am goin' there to read a paper on the evil results of amalgum fillins."

Well the meetin' passed off kind of nice, and it was good to hear each dentist tell his experience. Before we closed the head man said, "We will listen to Dr. Brown's paper."

I never heard a man so gifted-like before. He spoke on the beauty of gold as a fillin', and that it was the only fit thing to put in anybody's mouth, and related case after case of persons who had come to him suffering bodily diseases; and that he had cured satrum, catarr, diabetus, cold, etc., by removin' amalgum fillins and puttin' in gold.

The meetin' then adjourned *sine dye*. I came home, and the first thing Sarah says to me, "Thomas, what's the matter?" Sarah, I says, I am a murderer; I have caused lots of people to die. I have sent unborn babies to purgatory by filling their mother's teeth with amalgum. She says, "Thomas, you have been drinking." I told her I wish I was drunk, and to explain I told her what that city man had sed. She called me an old foole; told me to go to bed, dream over it, and the next morning I would feel better. I went down to the office and got an old tooth that I had pulled for a man, who told me that it had been filled over thirty years. The tooth had got loose, but the amalgum fillin' was in it as good as ever.

I put it under my pillow when I went to bed, and this was my dream. . . . I had just finished sweepin' up the dirt in the office one mornin' when a lady came in and says "good mornin', doctor." I said good mornin' as sweet as could be, as she was uncommonly good lookin', and asked her would she have a seat, which she did. After I had slicked up a bit I asked her what I could do for her. "Doctor," she says, "I guess you do not remember me. Don't you remember fillin' some teeth for Cora Smith before she was married." Then we had to talk about old times a bit, and I asked her how the fillins were I put in her teeth. She says, "They are all right, and that is what I have come to see



you for, and if you like I will tell you quite a story about my teeth." As I did not have much to do I told her I would be pleased to hear her. "Well," she says, "after I was married I moved to the city, as you know, and, as my husband is welthy, we live in good style. One day I had a pain in my face, and was reckomended to Dr. (I swow if she did not mention the city dentist's name that read that paper on amalgum fillins), as one who knew how to do the best work. He looked in my mouth, and said the pain came from those fillins you put in. I kind of doubted his word, as they were not sore, and told him I did not think they did. He said that the mercury in the fillins caused the pain; that it was poisoning me, but I did not let him remove them. Well, he took a little hook like a croschay hook, and finally told me that my teeth were very bad; one he would have to put somethin' in it before he could fill it, and what he put in stopped the pain, and in time I had them all filled with gold. Within six months some of them got tender near the gum, and I had two of the fillins taken out and filled over. Well, to make a long story short, every time I went to him he wanted to take out those fillins of yours and put in gold. Once I remember I had a cold, and my throat was sore, and he told me that if I would allow him to remove them I would get well; that there was enough mercury in them to kill a whole village, but I would not allow him to disturb them. Somethin' has been the matter with those fillins of his every little while. I have had them filled and filled, till he last told me that my teeth were too soft, and would not stand gold, and he has filled them with a cement. The cement is comin' out, and as we have moved to a city nearer my old home, I have left them to see you. Now, doctor, I want you to look them over and fill them with the same fillin' you put in the others some twenty years ago." I looked them all over carefully. How well those fillins had preserved the teeth. One was a lower molar with a large cavity on the top of the tooth that extended over the side, way down into the gum. It was all there, with no sign of any decay. As the mornin' was well gone, I asked her if she would come in the afternoon. She said she could, and I filled all of the teeth with amalgum. Every year that lady came to see me about her teeth, and till her death some ten years after, I only had to refill one tooth, and that was one she had broken eatin' pop-corn.

I have been dreamin' a good deal lately. The other night I dreamed of rubber plates causin' sore mouths, but I waked up to know it was only a dream.

*Plain Thomas Jones.*

## SHOULD ROOT FILLINGS BE INSERTED WHILE PURULENT CONDITIONS EXIST AT THE APEX?

*W. C. Davis, D.D.S., before the Nebraska State Dental Society.*

With few exceptions the diseases of the apical space are the result of the death and decomposition of the contents of the pulp canal. We have irrigation, inflammation, congestion, infiltration and suppuration of those tissues in the apical space.

To our question in brief, we would say that generally the root filling should not be inserted till the purulent conditions are removed, or so nearly that nature is able to destroy the purulent condition by her own reactive force. However, there are some of the worst forms of pus formation connected with the apical space, that demand immediate root filling; and when I say DEMAND, I mean that it is the easiest, quickest and surest way of avoiding further trouble and saving the tooth for the patient. So much of the success of the operation of root filling depends on the skill of the operator, that even our authorities on dental pathology and our most expert diagnosticians make mistakes and fail. Skill will only come with years of experience. We younger members will necessarily have to frequently consult those who are considered authority on dental pathology. My practice in this line is largely based on the theory and treatment of Professor G. V. Black, who, as a dental pathologist, has no peer.

As a differential diagnosis between the first stages of apical pericementitis, and those of more advanced character, where there is breaking down of the cellular tissue and migration of the white blood corpuscles, all of the indications of simple pericementitis are aggravated, and we have a sense of fullness and pressure, and patient can only get relief from extremes of heat or cold. In the more advanced stages there are signs of swelling; the patient complains of a throbbing sensation; the pulse rate is generally increased; there is general rise in temperature; the patient becomes more nervous and irritable and we have all the symptoms of a forming abscess. These are the symptoms which characterize the formation of an acute abscess. The cause of all this is decomposition and fermentation in the root canal and the stoppage of its chance for exit.

After the adjustment of the rubber-dam, my treatment is, topically, to thoroughly cleanse the pulp chamber, seeing that root canals are not clogged, being careful not to force any of the septic matter through the apex. Rinse thoroughly with peroxid of

hydrogen, which is the best pus ferret known to the profession of medicine.

Its action is prompt and complete, leaving simply water and oxidized, disorganized organic tissue. Then simply lay in the pulp chamber loosely some good disinfectant and deodorant. Every practitioner has his pet remedy for this case; but I use Black's 1-2-3. Put a loose pludget of sandarac and cotton over this. As a revulsive, I paint the gum over the affected tooth with aconit and iodine.

Internally, I administer aconit, to control the temperature and swelling, with hyoscyamus, where the patient experiences much pain. Where the hyoscyamus is not sufficient to relieve the pain, I administer an opiate (opium instead of morphine, as its influence of the suppression of morbid discharges is much more efficient than the salts of morphine). Usually, a cessation of swelling and pain will be noticed in a few hours, when I administer a little quinine as a tonic, and treat root canals as with ordinary dead nerve, not inserting my root filling till all signs of purulence and pericementitis have disappeared. Let me emphasize the fact that all stoppage of the cavity must be thoroughly removed, as at this stage the products of fermentation are still being exuded, and any stoppage will cause recurrence of the difficulty.

When an abscess has been allowed to remain purulent, and has not been of such an active character as to cause pointing or formation of a fistulous opening, it sometimes becomes chronic, when it may become encysted in an enlarged pocket adjacent to the apical space, or it may burrow several inches from the seat of origin.

This is difficult—only rivaled by necrosis.

With a chronic blind abscess the tooth is generally comfortable, yet in some instances there is a slight soreness. Comfort to the patient generally results from the first treatment; but like an enemy in ambush, purulence is still hidden, to return on the slightest stoppage of the root canal.

After the adjustment of the rubber-dam, my treatment is to provide such a drainage through the root canal that no stoppage can occur, securing a free evacuation of the pus. But let me caution you not to inject the peroxid through the apex into the blind abscess; for its expansive power, when fresh, is twelve times its ordinary bulk, and serious trouble may result, provided stoppage at the apex should occur just after it is injected. As a cleansing agent, there is nothing better than campho-phenique, as nature will tolerate a considerable quantity of this, when injected into a pus

pocket, without showing signs of irritation. Where this course does not succeed, I force a buccal or labial opening through alveolus to the seat of the trouble; then treat as an ordinary abscess with fistula.

These blind abscesses are sometimes associated with necrosis, and in a great many instances with absorption in the region of the apex, and calcinic deposit on the root. This necrosis must be removed, as well as the calcinic deposit, and the root made smooth. It may be necessary to amputate a portion of the root after my root filling has been inserted.

In treating an abscess with fistulous opening, either acute or chronic, I adjust the rubber-dam, clean and disinfect the cavity and pulp chamber. I then cleanse the root canal by mechanical means, and disinfect.

I then satisfy myself that there is an unobstructed passage from the pulp chamber through the fistula. To do this, I generally force tepid sterilized water through by means of a Dunn medical syringe. I now force through the entire tract peroxid of hydrogen, which will mechanically and chemically clean out all disorganized tissue and septic matter from the tract. I then, if a front tooth, take a wisp of cotton or silk floss, dipped in carbolic acid, and insert in the root canal, and by a pumping motion, aided by a rubber plug, force a little of the carbolic acid, full strength, through the entire length of the canal, till the fistulous opening shows signs of cauterization.

This is to destroy the pyogenic membrane, and may be omitted in acute abscess, but should never be neglected in chronic abscess. If a back tooth, I use creosote and iodine instead of carbolic acid. If I have used carbolic acid, I syringe the root canal with campho-phenique, which, being composed partially of carbolic acid, will, by a chemical union, remove all of the carbolic acid in root canals of front teeth, and will mechanically remove all of the surplus iodine from roots of back teeth. My reason for not using creosote and iodine in front teeth is to avoid discoloration. Carbolic acid not being so good. I then, as in all other cases, dry my root canals thoroughly, then moisten with eucalyptus oil, and again dry with cotton, then pump in chlora-percha thoroughly, and follow that up with a proper sized gutta-percha point. It will do no harm, if it goes through the apex and out the fistulous opening. You can depend on this; forty-eight hours and your patient will be well, provided the abscess is not associated with a calcinic deposit or necrosis, then you must cut through the alveolus.

General treatment during such an operation plays a very important part, and no dentist can meet with general success who does not frequently resort to it.

This general treatment should be by sedatives, thus controlling pain, and keeping down the temperature. These indications are, small and frequent pulse, swelling and heat. For this aconit stands at the head of the list.

Where the pulse is full and frequent, temperature high, prescribe verantrum, and as the pulse goes down the temperature is reduced.

If the face is flushed; eyes bright, with contracted pupils; heat of the head increased, accompanied with restlessness and increased temperature, combine gelsemium with aconit. These are indications of irritation of the cerebro-spinal centers, met by gelsemium. As the nervous system is relieved the patient rests, and the pulse and temperature go down. I have seen as marked antipyretic effects from this as from any remedy given, rivaled only by aconit.

When patient complains of burning heat; pulse frequent, with a sharp stroke; the skin dry, pus is indicated. This lessens the frequency of the pulse and favors the eruption, where we are certain that the abscess must point.

However, whatever means you may employ, keep your patient from pain, and at the proper temperature, giving nature, aided by your topical treatment, a chance for recuperation.

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### RUBBER PLATES.

*T. F. Skeede, Seward, Neb.*

Horace Greeley lived in the city of New York, and wrote a book entitled "What I Know About Farming." I live in the country, and will try to tell our city brethren what I know about rubber plates.

Being confined to a country practice, my patients are largely from the farming community, and cannot afford a continuous gum plate or the price of bridge-work. If we try to talk "continuous gum" or "bridge-work" to them for ten dollars a tooth, they hold up both hands in holy horror. With all due regard for the great and shining inventions, such as implantation, cutting off sound teeth for abutments for bridge-work, continuous gum at \$75 a

plate, etc., I know of no invention that has been of such benefit to suffering humanity as vulcanized rubber as a base for artificial teeth.

Professor Haskell will tell you that rubber plates will cause absorption of the alveola. Mr. President, "great men will differ," consequently I differ with Professor Haskell. I have here a cast showing absorption of the alveola, after wearing a temporary plate for eight years. I have also a cast showing absorption of the alveola after wearing no plate at all for fourteen years.

Some will tell you that rubber is poison, causing diseases of the gum, or so-called "rubber" sore-mouth. Now, Mr. President, I do not believe there ever was a case of "rubber" sore-mouth, and I challenge any one to bring me a case of "rubber" sore-mouth that I cannot cure with a rubber plate.

The worst case I ever saw was under a small platinum plate that was put in the mouth in England, and had been worn four years without being removed. I removed the plate and found several very odoriferous substances, among them four roots, two of them ulcerated; also the liveliest case of "rubber" sore-mouth that ever came under my notice.

A gentleman came to me one day with a very sore mouth. He had been wearing a small rubber plate, and his physician had told him that the mercury in the rubber had salivated. I cleaned his plate, which he was then wearing in his pocket, gave him a small bottle of listerin, and told him to put the plate in and wear it, cleaning it three times a day. He was all right in a week, has worn his rubber plate over three years, and has not been "salivated" since. It is not the rubber that makes the mouth sore, but the filth that is allowed to collect on and around it. A plate that is properly constructed is easily and quickly cleaned with a little water containing a few drops of ammonia.

The first thing in making a rubber plate is a perfect impression, which should be as perfect as it is possible to get it. This "good enough" will not do, for nothing is good enough which can be made better by a reasonable amount of time and perseverance. I use plaster, modeling compound, or a combination of both, whichever will best answer the purpose. No one thing is best in all cases. Then get a perfect articulation, for as much depends on the articulation as on the fit of the plate. After I get my articulation, I examine the mouth thoroughly for hard and soft places. I then scrape my impression on the median line from front to back, scraping deepest where the mouth is hardest, cutting away well in the front part of the palatine surface, as Professor Haskell

would say "to relieve pressure," but in reality making an air-chamber, and relieving the pressure at the same time. After pouring my model and separating, I scrape the model where the mouth is soft, deepest where the mouth is softest. I then cut a groove across the palatine arch, near the back edge of the plate, and continue it entirely around the model, near where the upper edge of my plate will come, thus making an additional air-chamber of the whole plate. For my base plate I use common tea lead, using two or three thicknesses, as occasion requires, which, by the way, does not require more than half the thickness usually given to rubber plates, waxing where thickness is needed. After flasking and separating I remove all wax carefully, then usually cover both casts with very thin tin foil, but always cover the model. Next I soap well and pack, thus vulcanizing my rubber between metal, insuring a nearly finished plate when it comes from the vulcanizer. I never boil my rubber plates.

One of the greatest objections to rubber is that it shrinks in cooling, and creeps away from the teeth, leaving space for saliva, etc., to work in. If a plaster cast has been boiled in water at 320° for an hour, the plaster is so soft that it offers no resistance to the rubber. I use a tin blacking box cover, or something similar in the bottom of the vulcanizer, setting my flask on this, putting in but one or two teaspoonsful of water. Nothing touches my flask but hot steam. The plaster comes out hard, and the rubber firm against the teeth. A plate vulcanized between metal will have a harder surface than can be put on it in any other way. If cleaned semi-occasionally, it will never make the mouth sore, unless there is a misfit; and when the alveola has absorbed so the plate no longer fits, it is time to give some fellow a job of making a new one.

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While I allowed my patients to be the judge of what teeth should be removed, I extracted many I might have saved; but when I became my own judge of what teeth should be extracted I soon gained the reputation of being a good dentist, instead of a good tooth puller. I often lost transient patients and sometimes regular patients, by refusing to extract teeth that I believed I could save, but I gained more than I lost, and those I gained were of the more intelligent, influential, and profitable class. Often by saving a tooth, a transient sufferer came in to have extracted, I have gained a fast friend, and a permanent, profitable patient.

## PROSTHETIC DENTISTRY.

*Dr. Haskell, Chicago.*

In 1845 I commenced the study of dentistry with a practicing dentist in Boston. My first beginning was the grinding of material for the making of porcelain teeth. Perhaps all of you are aware that porcelain teeth were made of feldspar, quartz, and clay, ground in a quartz mortar. I have spent months grinding material and mixing material, and passed years among other things grinding block teeth, such as are now represented by gum sections, made in molds. In those days teeth were made for each case. All were metal plates, gold, platinum, and silver, and the teeth were carved for those who used them. The dentist would send the swaged plate with the wax, indicating length and thickness of the teeth. The material used was soft, and had to be handled with care. The teeth were all carved out, six in the front block and four in the posterior. Pins were soldered in the teeth and blocks fastened to the teeth. Afterwards the teeth were made with the pins set down into them and soldered, just the same as all plate teeth nowadays. In those days they were soldered to the plate. You who have been in practice only since the introduction of rubber know nothing of what this meant. The dentist had to select a set of single gum teeth, grind them to the plate, articulate them, invest and solder. We did not use gas in those days, but alcohol. We had to solder up this full set, upper and lower, with alcohol. You may congratulate yourselves that you are living and working in this age of dentistry.

On the introduction of rubber, in about the year 1858, the first rubber plates were made. I was then in Chicago with Dr. Allport. We commenced using this rubber soon after it was introduced.

I wish to say right here that on the introduction of rubber there was a retrograde movement in mechanical dentistry, which did not change up to a very recent date. I may say that the forward movement began when crown- and bridge-work was introduced, from the fact that it demanded of dentists a knowledge of the use and working of gold. From that time there began to be an advance movement, because, as I said, every dentist needed to know how to work gold, and that was an inducement to him not only to make his crown- and bridge-work, but also metal plates.

One great difficulty with prosthetic dentists is the teaching of our colleges. You take nearly all of our graduates and they are better prepared to fill a tooth than to make an artificial denture.



With all the studies which the dental student has to take up—a large portion of the studies of the medical student, and special studies for dental students, then the time he has left to spend on the really practical part of his college education is small. The student spends more time in the theories; he is more interested in operative than in prosthetic dentistry. The student is partly to blame, but with the present method of instruction in colleges I do not see how it is possible for the student to make that progress in technical instruction in the laboratory that ought to be made. It cannot be done in the lecture-room, though there must be lectures on general theories. From my experience in different dental colleges, I have had pretty good opportunities to know what I am talking about in this matter. There must be some lectures on studies on general theories; but it is just a waste of time for a lecturer to undertake to describe a method that the student has got to follow in the laboratory. It goes in at one ear and out of the other. He never understands it till he does it himself.

There is a great deal of time wasted in the lecture-room. The student had better be in the laboratory. Another great difficulty is the fact that many of the demonstrators in our colleges are young, inexperienced men. You will often find a last year's graduate as demonstrator. The demonstrator in the laboratory should be a man of experience. The lecturer ought to go from the lecture-room to the laboratory, and follow up his lectures by personal instruction, so students may understand what they have been taught in the lecture-room. I do not know how to remedy this matter, except it be to relegate the practical part to the last month or two of the term, putting the students right into the laboratory and keeping them there, lectures and all. They will learn more in this way than in the whole course of two or three years. The difficulty is that students are so apt to be graduates on theory. I have seen dental students who could tell you the anatomy of the foot, but could not make a rubber plate. This is all wrong, and was one of my chief reasons for establishing a post-graduate school.

I have a large number of models—all metal plates. I have three long shelves filled with models of full upper cases. Till a dentist can take in at a glance the peculiarities of these, he does not begin to realize the condition of the human jaw, after wearing a plate more or less years. I have cases that show a small amount of absorption where the teeth have been out for years. Most of the ridges are small. I do not think most dentists have had an opportunity to see a collection of models arranged like this.

This condition of things did not exist before the introduction of rubber plates. Within a very few years after I commenced the use of rubber, I began to notice a great change in the alveolar ridge. It grew on us constantly. I could not account for it.

After I had been in Chicago about fifteen years, I returned to Boston and spent a couple of months there, doing work for old and new patients. I took occasion to examine many mouths, among them patients who had worn plates from fifteen to twenty-five years. The gums under those plates did not seem to have changed at all. I was astonished. I did expect to find considerable change.

Last September I was in Boston. I saw one of the first continuous gum plates I had ever made. It had never been repaired. Another was a gold plate; after forty years, in splendid condition. Facts like these mean something. Theories are very well.

Here Prof. Haskell showed models of different cases, of such interesting nature and great variety that it would certainly profit any practitioner to study them well.

There is nothing that has so simplified the fitting of rubber plates as Babbitt metal. There is no shrinkage. It is hard, yet sufficiently soft and smooth. You can use your oiled sand successfully.

Dr. Billings has been doing a valuable service to the profession in the last few years, in introducing his prepared sand for dental work. I am glad to know that his efforts are appreciated.

In making plates, there is one thing overlooked, and largely responsible for the effect on appearance of upper lip. You can raise the impression at the base for the extension of the cuspid teeth. It is very simple. We have an invariable rule: There is not a solitary case where there is not loss of the cuspid eminence, if the cuspids have been extracted one year or more. The plate should be made fuller and higher over the cuspid teeth. The fullness should not come under the nose.

There are some peculiarities of the human jaw. In ninety-five out of one hundred mouths there is a depression on the left side of the jaw, over the cuspid tooth; not on the right side. Another thing—the process is shorter on the left than on the right side. The reason we so often see artificial teeth too short on the right side is because the dentist arranged the cutting teeth according to his model, instead of by the mouth. What is the cause of this? I can hardly find a dentist who has even noticed the fact. I had a theory! That most people put the food into their mouths at the right side, in the region of the cuspid tooth. If the teeth are

sufficiently good, the food is masticated more on the right side, consequently it is developed more on the right side than on the left.

Dr. Talbot's theory is this, and it will surprise you all: Are you aware of the fact that in chewing, your jaw moves from right to left, not from left to right? Gradually, in course of time, the process and teeth are changed.

Oftentimes, on the lower jaw one side of the jaw stands farther from the median line than the other—the left side. I do not understand why this is. On the left side of the jaw you will often find that the teeth are longer and fuller than on the right.

I use no gum sections. I use plain teeth, because I cannot use gum sections satisfactorily, their arrangement being so arbitrary. There are more failures from faulty articulation than from all other causes combined. Everything is right until the patient closes the jaw.

The cutting edges of the six anterior teeth should form part of a circle, of which the radius is the width of three anterior teeth at one side of the median line. This circle should pass about through the middle of the grinding surface of the second bicuspid, and through the middle of the posterior lingual cusp of the first.

I think aluminum, as it is now manufactured pure, is an excellent substitute for rubber. About twenty-two gage is very nice to work. It is easily swaged, and preferable to rubber.

I do not condemn rubber; many cannot afford anything else.

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#### A CHEAP AND EFFICIENT SUBSTITUTE FOR A FLASH LAMP.—

Take a two-dram bottle, into which fit a cork perforated to admit tightly an ordinary glass medicine-dropper, small end uppermost, and the taper portion bent at right angle; the orifice also made fine by heating it in the Bunsen burner till it contracts a little. To use it, enclose in the bottle a piece of granulated zinc the size of a pea, and a little less than a dram of hydrochloric acid. The result will be the evolution of hydrogen gas, which, as it issues from the tube, may be set on fire. The heat is intense, and, if carefully manipulated, the instrument will be found more satisfactory in every respect than the ordinary flash lamp. If the flame is too large, as it is apt to be at first, a few moments' waiting will see it diminished, as the pressure of the gas in the tube is lessened. It is better to freshly charge the bottle every time it is brought into use.

*Dr. W. S. Elliott, Sag Harbor, N. Y.*

## OUR DENTAL COLLEGES AND DENTAL DEPARTMENTS OF UNIVERSITIES.

The following indicate the results of last session :

	Students in Attendance.	Graduated.
Baltimore College, Dental Surgery.....	131	20
Kansas City Dental College.....	70	4
University of California.....	..	28
University of Maryland.....	108	16
Vanderbilt University.....	111	10
Philadelphia Dental College.....	208	30
Cincinnati College.....	39	4
Pennsylvania College.....	197	23
New York College, Dental Surgery.....	286	46
Northwestern University.....	68	6
American College, Dental Surgery.....	..	28
Ohio College, Dental Surgery.....	120	15
Southern Medical College... .	100	8
Royal College of Ontario.....	91	37
Western, of Kansas City.....	93	6
Alabama College of Dental Surgery.....	15	3
Meharry Medical College.....	7	..
National University.....	60	6

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Some years ago I heard of a famous dentist in one of your northern cities, who could make and place in position a gold crown in twenty minutes. This seemed so marvelous to me that I could not rest in peace till I had myself witnessed this (en) lightning artist. I went, I saw, I was conquered, for I myself saw the remains of a molar banded, a flat piece of gold soldered on for a top ; this was bitten into to form an articulating surface, and the resulting crown (heaven save the mark) cemented into place, all within the limit of twenty minutes. That ocular demonstration convinced me that the feat was possible, and it likewise cured me of the desire to "make a crown in twenty minutes."

Dr. Gordon White's description of his method of making a crown, as appeared in the June ITEMS, is only a slight step in advance, a very slight one to my mind, over the method just described.

In the early days of "crowning" I followed his method, but the result was so uniformly unsatisfactory that I long since gave it up. For with a quantity of dies I could rarely, if ever, find one to

exactly suit the case in hand. Of course, many could be found that would answer, but that degree of perfection was not what was desired.

So I long ago discarded all the dies, and now proceed as follows: The band is fitted to the root and cut down till it just clears the opposing tooth or teeth, and contoured to a greater or lesser degree of satisfaction (usually *lesser*, to be honest about it). It is then placed "home" on the root, filled up with wax, when necessary, and an impression of that side of the arch is taken in plaster. An impression of the same side of the opposite jaw is then taken and the casts mounted on an articulator. The articulating surface of the crown can then be artistically carved up in pink paraffine and wax (preferably), the result being a perfect articulation with the opposing teeth. Fusible metal dies are then made, and the cap struck up in pure gold of from thirty-three to thirty-five gage. This cap should telescope slightly over the band, which allows this portion to be "crimped in," so that it may be held securely in its exact position on the band for soldering.

In this manner a most artistic and beautiful articulation is always obtainable, there is no stereotype surface, and the result always repays one for the time consumed, time which, by the way, is fully charged for. *C. Edmund Kells, Jr., New Orleans.*

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### COST OF LIVING AT THE FAIR.

EDITOR ITEMS OF INTEREST:—From letters received from dentists in different parts of the country, I am inclined to think that there is lack of information as to the expense of living in Chicago during the season of the World's Fair. Board and lodging were never more reasonable than now. Rooms can be had, where two are willing to room together, for fifty cents a day each. First-class rooms and accommodations can be had from a dollar to a dollar and a half per day, when parties wish to room alone. The highest-priced hotels are entertaining people for \$5.00 per day, room and board. For twenty cents, in restaurants just outside of the Fair ground, will be furnished three eggs, a cup of tea or coffee, and all the bread and butter one wants. For thirty-five cents can be had a good, well-cooked steak, potatoes, tea or coffee, and bread and butter.

The boat, railway, and street car companies are doing all in their power to furnish the best and cheapest transportation possible

Of course there are a few catch-penny schemes, but they are not in connection with the responsible hotels or the Fair. Considering the size of the Exposition, they are few.

I have made this investigation for the purpose of informing the dental profession of the exact facts concerning the expense here, and would urge on every one to remain as long in Chicago as possible. A month or six weeks can be spent very profitably in seeing what the world has done and is doing, and a longer time could be used to great advantage. This can be done by stopping at a moderate-priced hotel.

For the accommodation of the different dental associations which are to meet in Chicago before the convening of the World's Columbian Dental Congress, I have secured the Kindergarten College Hall, 10 Van Buren street, which can be used for all meetings desiring rooms.

For any further information, address

*J. N. Crouse, Chairman.*

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#### A SIMPLE HOLDFAST FOR PORCELAIN INLAYS.

*Dr. Genese, Baltimore, Md.*

The following plan I find good: Get the impression of the cavity and edges with number 30 to 60 gold foil, when thoroughly fitted fill with hard wax, heat by spatula, and press to fit tightly. Remove and invest in Teague's compound as lightly as possible. When dry burn out the wax by laying the imprint wax on a piece of plaster to absorb the wax as melted; this leaves a true mold of the cavity and edges and no force to displace the mold. (No need to have the investment outside the gold overlap.) Now take some waste gold foil, roll it up to form a pellet that will lay inside the cavity about half the depth. Put the porcelain or glass mixture in quite wet, and press and dry with bibulous paper, then burn it in the usual way, firing each till perfectly formed and full enough. It should be a little below absolute fusing point or enough to thoroughly shrink the porcelain without vitrifying it till the last layer. On removing the investment and peeling off the gold, the little pellet can be picked out, and a nice depression, with undercut edges, will be formed for the oxiphosphate to enter and firmly hold the inlay in place.

*Ohio Journal.*

## WOMEN DENTISTS.

It is the intention of *The Dental Tribune* to devote considerable attention to the interest of women dentists. Probably few men are cognizant of the interest taken by women in our profession; from a list, which is as perfect as it can be made, but which by no means is complete, we find the number of women dentists in the United States to be as follows:

California.....	6	Minnesota.....	
Colorado....	4	Mississippi.....	1
Connecticut.....	2	Missouri.....	5
District of Columbia.....	3	Montana.....	3
Florida.....	1	New Jersey.....	4
Georgia.....	1	New York.....	10
Illinois.....	17	Ohio.....	6
Indiana.....	5	Pennsylvania.....	30
Iowa.....	4	Rhode Island.....	2
Kansas.....	13	South Dakota.....	1
Kentucky.....	1	Texas.....	6
Maryland.....	1	Utah.....	1
Massachusetts.....	2	Wisconsin.....	5
Michigan.....	6		

## DISCUSSION ON AMALGAM FILLINGS.

In the Nebraska Society.

Dr. Funk (Beatrice, Neb.): I believe there are better gold operators than amalgam operators. There is too much carelessness in putting in amalgam. I believe we should use as great care and skill in using amalgam as gold. The best operators have to put it in—you all have to use amalgam.

Dr. Sims (Lincoln): A dentist who can put in a good amalgam filling can do anything, for a good amalgam filling is certainly a very hard thing to find. There are places where amalgam should be used, as buccal surface of lower molars, for instance.

A gold filling, if properly put in, will stay where it is placed. An amalgam filling may break away. Inside of a year or two there is often a margin around it, in which you can insert an excavator or broach. Gold does not change in shape, if properly used and cavity has been well prepared. With an amalgam filling you cannot control changes in the material.

Dr. Hill (Lincoln): I believe there are more teeth saved to-day with amalgam than with gold. If the cavity is properly prepared and the alloy well manipulated, you cannot insert an excavator in the margin inside of four years. If the margins are cut down square, amalgam properly mixed and well handled, and when hardened is burnished down, it will not creep up in the middle; even the dirty old copper amalgam, an amalgam that will save many teeth better than any other material.

I am not an advocate of indiscriminately filling teeth with amalgam, but I do believe it will save teeth, and save them well in a great many cases where gold would not; for instance, distal cavities in back of the mouth.

Dr. Dieffenbacher (York): I have never found that an amalgam filling would answer where one can put in a good gold filling. There is generally shrinkage.

Dr. Funck: I have seen a gold filling that had been in for forty-two years, soft gold, and had done good service.

Dr. Haskell (Chicago): The first amalgam was made about forty-eight years ago. It was then made from a silver quarter, mixed with mercury and placed in the tooth. These fillings remained in for many years.

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My method of constructing corners on dead incisors may not be new, but with me it has been so successful that I give it for the benefit of those who are looking for a better way of raising that class of teeth than the often unsuccessful method of "building up" with foil and the mallet.

After the roots have been treated, the apex successfully filled, and all soreness has passed away, cut away with a sandpaper disk, all uneven edges, till you have brought the enamel margin to a perfectly flat surface. Enlarge the canal for about two-thirds its length, and fit snugly a pin of fine gold, allowing it to project to the biting edge of the tooth. Remove the pin, take a piece of pure gold plate, a little larger than the surface of the cavity, lay it over the surface and drill a hole corresponding to the enlarged nerve canal, start the pin through the hole and drive to place. Remove pin and plate and solder together. Replace, and with a corundum wheel or engine, grind the plate even with the margin of the enamel. Build up the corner as you desire it when finished, with wax, remove, and insert in plaster and marble, dust the pin down. After the investment has thoroughly hardened, work out the wax



and melt into the mold, formed by its 22 solder, "spatting" it down with a steel instrument before it cools. Before finishing, it may be well to try the piece in, and grind down any places on the surface which are not perfectly level with the enamel, finish, cement to place, and you have a corner which will not scale or pit, and will outlast any corner which can be built of foil. I have been trying this method in all such cases for five years, and have never had a failure to my knowledge.

*E. R. Vaughan.*

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### THE USE OF COCAIN AS AN ANESTHETIC.

P. Reclus says subcutaneous injections of cocain in surgery are perfectly safe, and that accidents are only due to ignorance and carelessness.

As regards the strength of the solution, he severely criticised the use of strong solutions, limiting the strength to two per cent, preferring one per cent in more extensive operations, in which ten to fifteen injections are necessary to anesthetize the region.

When the surgical operation is simple, as for instance the extirpation of a subcutaneous tumor, a sebaceous cyst of lipoma, Dr. Reclus, after having determined the place of the incision and its extent, thrusts the hypodermic needle through the thickness of the skin, pulling it back as soon as it has reached the cellular tissue. Then the rod of the piston of the syringe is pushed down till a slight white swelling becomes apparent on the skin. No more pain than that caused by the puncture should be inflicted on the patient, if the procedure is carried out properly.

When the injection is completed, a few minutes should elapse before beginning operation—three to four minutes when the solution is of two per cent strength; five to six minutes when it is one per cent.

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The question of how to make dentists is simply a problem of special education and training, and one which must involve a recognition and adaptation of the broad fundamental principles on which all education rests. The belief that the manual training idea, or physiological method, is one which promises the very highest results, is widespread.

*Dr. Felix Adler, in Review.*

# INTERNATIONAL REVIEW.

By George Randorf.

## ANESTHETICS AND ANESTHESIA.

It is refreshing, indeed, to have our attention arrested once in a while by an unexpected attack on some well-established practice in a profession. Anesthetics of every description (or no description?) seem to have the field in dentistry of to-day, so that their often treacherous use is resorted to on the most trivial occasions. It is sufficient for a capricious or ignorant patient to mention to the "doctor" that anesthesia may be practiced to extract a root or fill an insignificant cavity, and the obliging dentist is ready to respond with some death-bearing agent.

The experience of Dr. Bernhard Salzer, of Buda-Pesth, faithfully portrayed in *Odontoskop*, may serve as a warning to both young and old practitioners, against the rather too free use of those powerful excitants. He describes a scene—one of many—of a young man under anesthesia, driven by unnatural excitement, produced by the administration of ethyl bromid, who could not be controlled by two men in his frantic attack on everything within the reach of his hands or feet. The sight was sickening, and could not but touch the sympathetic instincts of the dentist, who then exclaimed, in the words of the celebrated Dr. Billroth: "In such cases we must acknowledge the truth of those who would never anesthetize."

The state of mind of these observant doctors strikes us as peculiarly analogous to that of our own fine representative of the *élite* of the profession, Professor Garretson, who declares in his usual felicitous style that "chloroform is more treacherous than is Mephistopheles." He says he never uses chloroform, save under compulsion, and fears always while he uses.

The same may be said of ether, cocain, ethyl bromid, pental, etc. It is true that on awakening a patient seldom feels any *immediate* after effects of a serious nature, and the phenomena witnessed, as above, thus seem to leave no trace whatever, though in the case of pental albumen has been discovered in the urine on the third day after its administration. But, aside from the latter disputed fact, I question the assumption that a certain cerebral experience may not engender a future susceptibility to repeat itself outside the administration of anesthetics, in accordance with the well-known biological law of our nature, governing the formation of habits.

To take a concrete example. The indiscriminate use of alcoholic treatment in medicine has been shown to be directly responsible for the formation of that most vicious habit of "respectable" drunkenness in many ladies of the finest families, both here and in England. It seems that greater protection ought to be thrown in the way of educating dentists in the proper use of dangerous anesthetic agents, which are employed by surgeons, only when the life of the patient depends on the operation.

As the late Dr. Th. David, of Paris, observes in his pamphlet on the same subject, in its bearing on jurisprudence :

Anesthesia is the great reproach which is directed against dentists. There is no doubt about it. This operation is one of the gravest ; the physician, as well as the surgeon, never practices it alone.

It is indeed gratifying to find that normal minds among dentists are awakening to the absurdity of this practice, in which, as Dr. Salzer significantly observes, flies are shot at from cannons, besides jeopardizing the well being, and often the life of the patient, while serving to brutalize the dentist, or rob him of an amount of nervous force, which may better be employed in the building up of his health and character.

With harmless and effectual local anesthetics of known composition, which reduce the pain of any operation to the minimum, dangerous nostrums ought to be left severely alone, while the general anesthetics must gradually be relegated to their proper position of importance, and resorted to in extraordinary cases only, after due precautions have been taken.

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## DENTISTRY AND THE OTHER MEDICAL SPECIALTIES.

The question of the relation of dentistry to the generally accepted branches of medicine is being debated in both French and German dental journals. We have presented to the readers of the *ITEMS* the actual status of that important discussion, and will add some interesting views of that German professor who appears to embrace the subject from a more philosophical point of view.

In the first place, Prof. Jul. Parreidt, of Leipsic, defines dentistry as including the knowledge of the teeth, the jawbones, and the mucous membrane of the mouth, then the correlation between the teeth and the other parts of the organism, both in health and disease, and the knowledge of tooth, gum, and maxillary prosthesis.

To this must be added the often-occurring painful face

neuralgias, as well as diseases of the eyes and ears, resulting from affections of the teeth; the laborious cutting of the wisdom teeth, meningitis through the penetration of pus into the skull cavity from the jawbones; pyemia and septicemia following inflammations of the maxillaries (in which septic pus is almost always formed, brought about by carious teeth containing microorganisms); all these are diseases which can be safely prevented by timely consultation of a scientifically educated and experienced dentist. At the same time it speaks for the possible services of dentistry, and it also proves the high responsibility of the dentist. This responsibility is not less great in tooth extractions, which are so often accompanied by sad results when performed by one who is ignorant; but also in fillings, for instance, the patients may be afflicted with long and sometimes great sufferings, if the operator does not possess a certain medical preparation and experience. The danger of transmitting diseases on account of lack of knowledge of mycoses and antiseptics also belongs here.

Among the causes separating dentistry from the other specialties of medicine, are:

1. *The number of teeth is so large that patients do not seem to care whether there is one more or less.*

If an eye is lost it is a great misfortune; but if a tooth is to be extracted it mostly signifies only a slight pain of short duration.

2. *The treatment of the teeth requires hard and painstaking labors.*

It is a peculiar fact that those are esteemed highest in society whose activity consists more in head and pen work, though this may sometimes be of far less value to it than that of the men producing urgent work with their hands.

3. *Because in the long and laborious dental operations, manual labor has so prominent a share, very few of the completely educated physicians have till now devoted themselves to this specialty.*

4. *In dental prosthesis the mental labor is evidently still farther removed to the background than in tooth operations.*

It is very probable that with the continued specialization and division of labor, there may be a division between tooth prosthesis and dental science. A class of dental mechanics may arise that will devote their whole attention to that part of dentistry, like opticians, instrument makers, etc.

In conclusion, the author says it must be admitted that the dentist requires a better preparation in the humanities, a course of study equal to that of any medical specialist.

## NECROSIS FROM TRAUMATISM TWENTY YEARS AGO.

An interesting case of necrosis of the maxillary, resulting from an injury received twenty years ago, was presented for discussion at the Odontological Society of Paris, by Dr. Schleier, through Dr. Poinot, and reported in *Revue Internationale d'Odontologie*.

The patient, a man forty years old, complained of severe pains in the left inferior molar. There was constantly pus exuding in the mouth, and he felt very weak for some time past. Some twenty years ago a horse kicked him in the region where he now experienced pain. He received another blow later on, and also a fall on the same side. Three weeks ago he was seized with violent pains, and as a result the left inferior wisdom tooth was extracted. At the time he presented himself at the clinic he suffered greatly, as stated above, there was an abundant suppuration, and the molar and second bicuspid were mobile and painful. The diagnosis was necrosis of the maxillary. The patient appearing very weak, buccal antiseptics were practiced and eight days later the teeth and a sequester were removed.

Dr. Roy: Why have they waited to remove the teeth? The immediate indication was to suppress the causes of the infection without neglecting operating antiseptics, then the buccal antisepsy applied later would have given still better results.

Dr. Poinot: I did not want to take the responsibility of an immediate operation, having preferred to prepare the way rather than open the door to germs.

Dr. Roy: It was not necessary to fear provoking infection, since the suppuration was already established, but it was very important to remove the cause of the evil.

Dr. Touchard: It is preferable, in my opinion, to operate immediately. I have observed a case where necrosis has formed in consequence of a delayed operation.

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The *Noroye Vremya*, of St. Petersburg, reports a case which illustrates the necessity and wholesomeness of State interference into private affairs when they seem to threaten public health. The police of that city made a "raid" on a dentist, and found all his instruments and furniture in such a filthy condition that the Governor thought it necessary to order the closing of that most anti-sanitary den, and permitted the lazy dentist to open another

office for the reception of patients only on condition of bringing it into a proper sanitary state and the faultless cleansing of all the instruments used.

While reading this I almost wished that our own health authorities would visit some of our dental colleges and "private" offices of some sluggish dentists, and then report the cases to an astonished world. What a dirty chapter that would make in the history of the profession.

Yet the human world is moving, and the better elements and nobler qualities of human nature are seen in some of our best institutions and representative men. The more the mind is polished, the fewer the chances for an unpolished instrument or untidy appearance. The more refined the feelings and sentiments of a gentleman the fewer the tobacco cesspools under our feet, and the larger the proportion of those free from the mischievous habits of smoking, chewing and drinking—those unseemly first-fruits from the touch of savage and quasi-civilized lives, the moderate indulgence of which by the more cultured serving as a dangerous precedent for those lacking proper moral self-control.

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Louis XIV. was born with teeth, and this fact was generally considered as a happy token of his glorious reign. One of his physicians, d'Aquin, informs us that Louis had bad teeth in the latter part of his life, which was not without influence on his pathological state. Indeed, he was always tormented with indigestions, vapors, fears of apoplexy. He ate enormously, very fast, without chewing, swallowing whole truffles, great quantities of peas and large pieces of artichoke, without being able to digest them. Nevertheless, his historians and physicians insisted very little on this cause of the malady, dental caries, except in four or five circumstances which occurred one after the other in 1685.

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A CUE ON THE NOSE.—A young Hungarian girl appeared at the clinic of a Buda-Pesth hospital, who had lost her nose through disease of the blood. An artificial nose having been decided on, the skin from her forehead was utilized for that purpose. However, as her forehead was very low, and the professor wanted "more skin," a goodly piece had to be cut out of the head proper, and it was just the latter piece that made the point of the nose. The operation

was very successful, everybody assisting in it congratulating himself in having been instrumental in giving the girl a decent nose. But a terrible mistake was discovered later—the point of the nose grew a crop of elegant long hair.

It is evident that some of the hair papille remained “fruitful,” and if the girl had not diligently manipulated her razor, she could soon plait another lock of hair from her nose.

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### VAJINSKIJ REMOVED.

The readers of the *ITEMS* will remember our article in June issue, in which it has been stated that certain irregularities are charged in the management of the Dental School of St. Petersburg, and our committee on the coming International Dental Congress in Chicago has been asked to drop the name of the head of that school from the list of honorary Presidents. The sad case of the suicide of Miss Taberio has kept public attention alive, and an investigation into the affair of that school has just resulted in the removal of the *notorious* Dr. Th. I. Vajinskij, and the temporary appointment of another to take charge from the 1st of July.

The character of that school for both sexes has suffered greatly through the revelation of the unsatisfactory state of things, and it is likely that the institution will be closed altogether. It is to be hoped that the investigation will serve as a warning to other schools of that character, and thus accomplish some good.

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THE YANKEE 'CUTENESS IN A FRENCH D.D.S.—A gentleman called on an “American” dentist in Paris (rumor has it that he was born not many miles from the place where he practiced) to have his teeth extracted. The waiting room was crowded; nevertheless, he was soon admitted. In the chair was a lady, evidently about to be narcotized.

“Please step nearer, doctor,” said the dentist, and the former, flattered by the title, approached to the chair and looked on. Extraction was effected, and the lady left the room.

“In gratitude, you shall now follow,” said the dentist.

“In gratitude? What for?” put in the gentleman.

“Well, you see, there are many patients, especially ladies, who would take gas only in the presence of a physician. I then call any patient from the waiting room, addressing him as doctor, and chip in ten francs extra.”

# OUR MONTHLY GOSSIP.

*By W. E. Blakeney, D.D.S.*

ARE INLAYS a success or a failure?

THERE IS a history of facial neuralgia in nearly all cases of chronic deafness.

DR. ROBINSON does not believe in the permanency of oxyphosphate as a filling material, without being covered by gold or alloy

WHEN THE pulp has been wounded, Dr. Spaulding touches it with camphor because of its healing qualities.

"THE FIRST element of true success in dentistry," wisely says Dr. Johnson, "as in other callings, is honesty."

THE HERBST method aims to destroy the pulp in the crown, and to save and keep it alive in the roots. Can it be done?

DR. VAN WOERT claims to have had satisfactory results in the treatment of pyorrhea by trichloroacetic acid and pyrozone.

DR. STEPHEN LEE contends that "it is malpractice to use air-chambers in dental plates." This is purely a subject of opinion.

NO DENTIST can afford to dispense with the use of peroxid of hydrogen. It should be fresh and kept in a cool place.

IT IS said on good authority that the quantity of mercury to use in amalgam fillings is thirty parts of mercury to one hundred parts of amalgam. The less tin in the alloy, the less mercury will be required.

IT IS reported that in Texas a convention has been called to organize a second dental association, which shall not be bound by the code of ethics.

"TOO MANY men," says an exchange, "try to pull themselves out of trouble with a corkscrew." True enough, but a pull with the forceps does the thing up nicely.

THE longer an intelligent, progressive dentist is in practice, and the more extensive his observation and experience, the fewer teeth he will extract. The more he strives to save teeth, the better he will succeed.

ELECTRICITY AS a reliable obtundent in tooth-drawing is a failure. The shock experienced by a nervous patient while having a tooth extracted is enough, without increasing its intensity by an electric current.



IT is the opinion of Dr. L. L. Barber that reports of dental meetings should be published in the newspapers. Better say they should be given to the dental journals for publication.

FEW MEN can keep house. What an unkept, dirty place they make of it. We enter few dental offices that do not show the cleanliness of a woman's work or the slovenliness of a man's neglect.

EDITOR DR. THEODORE F. CHUPEIN, of the *Dental Office and Laboratory*, is doing grand work for the profession by the publication in his journal of "Leading Questions and Answers for Dental Students."

EVERY ONE should bear in mind that the best protection against disease is cleanliness. Many patent antiseptic remedies and germ-killers are daily thrust before the public, but none of them, in cheapness and efficacy, beats soap and water.

"THERE SEEMS to be no definite rule governing the interregnum between death of the pulp and the period when this fact is made manifest by subjective or objective symptoms, or both," says Dr. Otto Arnold. This variation in time is due to systemic conditions, depending on the power of resistance or the *vis vitæ*.

FROM AN able editorial in the *Cosmos* on "Oral Hygiene" I copy this timely advice: "The good results obtained in the care of *la grippe* by a thorough hygiene of the mouth, suggests the importance of especial regard to this avenue of entrance by which so many general disorders find their way into the economy."

CAJAPUT OIL is said to be an excellent solvent of gutta-percha, and, if prepared according to the following formula, will be found useful for lining cavities and smearing root canals:

Cajaput oil,	
Chloroform.....	āā.
Gutta-percha.....	q. s.

"THE COBALT of Herbst," says Dr. Edward C. Kirk, "is the name of one of the elementary metals. It derives its name from its principal ore, which is a native compound of the metal cobalt and metallic arsenic. It contains from thirty-three to thirty-five per cent of arsenic. These ores are known variously as spieß cobalt, cobaline, glance, cobalt, cobalt bloom, and earthy cobalt."

THE *Zahntechnische Reform* reports the death of a man, twenty-eight years old, who, after the extraction of a tooth, had suffered from hemorrhage for several days. The patient returned to the dentist, who succeeded in stopping the hemorrhage. But the

wound became septic, for septicemia manifestly gained ground. The patient was transported to a hospital, where he died a few days later in terrible agony.

DR. B. F. ARRINGTON,, of Goldsboro, N. C., writes to the editor of the *Southern Dental Journal and Luminary* complimenting him for late improvements in his publication, and adds that he "loves his life work, not for the money that is in it, but for the boon it is to suffering humanity." It is well to love our work, few can do good work without having their heart in it; but it is the love of reward that sweetens labor.

A DENTIST in Germany has been sentenced to six weeks' imprisonment for "robbing the liberty" of his patient and company, who had come to his office for a denture previously ordered, but who wanted first to try how the new set would work before paying, for which the tooth doctor had locked them up in a room, thus giving pretext for the subsequent case of depriving them of their liberty, with the above sad "remedy" for the doctor.

"A CYSTIC TUMOR," says Professor Ingersoll, "should be erupted from its mucous contents by careful puncture at the lowest point, and then collapsed by pressure. This can usually be done by a pad of considerable size dipped in dry tannin and held firmly on the cyst by pressure of the lips or cheek. Mechanical treatment," he says, "should be confined to the external surface of the cyst, and consist of the use of stimulants and astringents."

OUR PUBLIC school system is to be investigated by five women acting as a commission in the United States in the interest of British educators, to ascertain what features it contains that may be incorporated in the new school bill before Parliament. The American system of public education, like the American system of dentistry is, evidently, attracting the attention of our British cousins. The sex of this commission proves the eminent fitness of women as educators.

EUCALYPTUS AND thymol is a preparation containing borate of soda, benzoic acid, thymol, oil of eucalyptus, oil of wintergreen, oil of thyme, oil of peppermint, and fluid extract of wild indigo. It may be used externally or internally. It is a non-coagulator of egg albumen. It may be freely used as a mouthwash, root-dressing, general detergent, for cleansing the hands, and wherever a good antiseptic is desired. It may be used freely about the mouth, as it is non-poisonous, non-irritating, and not injurious to tooth structure.

## OUR QUESTION BOX.

With Replies From The Best Dental Authorities.

[Address all Questions for this Department to Dr. E. N. Francis, Uvalde, Texas.]

**Question 111.** *A little girl of eighteen years, in appearance not over eight, was sick and feeble till five years ago, since which she has had fair health. She has all her deciduous teeth except that I have extracted the two upper centrals and left lower cuspid, being crowded out of place by permanent teeth. The three permanent teeth erupted last spring. The teeth extracted had very long roots, well up in the process, and the remaining teeth are all firmly set. There are no signs of more permanent teeth. What is best treatment?*

A very remarkable case. The querist states that the sister of this patient erupted her permanent teeth all over the roof of her mouth, at the age of twenty, without losing any deciduous teeth.

You have done right in treatment thus far, and all that can be done is to watch the case carefully, and assist nature in removing the deciduous teeth when the permanent show signs of eruption.

The sister's teeth failing to erupt before the age of twenty, and the development and health of present patient being poor, you are safe in allowing a few more years for full development.

Too early extraction will produce a more crowded arch than at present exists, and cases have been known where the permanent teeth have failed to erupt after the removal of the deciduous, late in life. Delay in extraction at the proper time will allow the unabsorbed roots of deciduous teeth to crowd the permanent out of place.

It is an unusual case, and it must depend wholly on your judgment for results.

Let us hear from you again. We would like much to see models, and hear more of the sister whose teeth erupted all over the roof of her mouth.

**Question 112.** *Kindly inform me, through ITEMS, the best and quickest treatment for dead teeth, and how to prevent them from becoming sore. What will reduce swelling immediately?*

Dead teeth are found in various conditions; some contain putrescent pulps; some have improperly filled roots, causing periodontitis, followed often with acute and chronic abscesses, etc.

Counter-irritants, antiseptics, disinfectants, antiphlogistics, refrigerants, sedatives, sometimes laxatives, narcotics, etc., all are useful under some conditions, no one remedy or treatment being best for all cases.

There is nothing that will reduce swelling immediately.

**Question 113.** *I have read several articles on amalgam in ITEMS, and those who advocated its use advise using the best, but I*

*find none stating which make is the best. Now what, in your opinion, is the best? Since I began practice I find amalgam fillings that have been in fifteen and twenty years, doing good service to-day, while many put in three to six years ago are almost worthless. Is this referable to poorer amalgam now used or to careless and faulty manipulation?*

Many men vote the Republican or Democratic ticket for the simple reason they never voted anything else, and many dentists use and praise some amalgams for the same reason. They become efficient in the manipulation of a certain make from long practice and accustomed use, and their work is very successful, while the same material in other hands would prove a partial failure.

Some amalgams should be used very dry—almost a powder—while other makes require more mercury to produce the same results.

Many advise a large quantity of mercury in mixing, and the removal of surplus by pressure, between folds of cloth, or skin, before placing in cavity, while others prefer to force the surplus to surface of filling, under the pressure of instruments during the process of filling, removing this surplus with bibulous paper till the cavity is filled, when in many cases tin foil is burnished over the surface till all free mercury is absorbed.

Now, in many amalgams, some metals are added to give edge strength, and this addition of tin changes the relative combination, giving us a tin surface, which is not an improvement, if the amalgam was properly combined.

A properly proportioned mixture should be chemically combined to oppose shrinkage, expansion, discoloration, etc. If we add a surplus of mercury, and remove it by pressure, the metals most easily acted on are, to an extent, removed with the mercury, thus changing the composition of filling, and failure will follow if the amalgam was made on scientific principles.

Some amalgams are improved by additions of tin and silver, but, if properly combined, this would not be the case.

The manufacturers can better afford to experiment with their amalgams, than the dentists who use them, and they should give full directions for mixing to obtain the best results. But few packages contain more than the address of maker and the wonderful results to be expected from the contents.

When you question careless and faulty manipulation in comparison with the past, you have only to take into consideration the rent of office and homes, the nervous rush of modern times, competition, the ease in which amalgam is plastered into half prepared cavities, often at wholesale rates, and your question is answered.

In selecting amalgam get the best—a brand made or sold by a reliable manufacturer, and that has been on the market a sufficient time for a test of qualities.

Select, if you wish, two or three brands, keep a record of filling, insert side notes regarding the manner of mixing, conditions under which the filling was inserted, then select the make best suited to your style of work, and don't go changing around every time you see a new advertisement.

There is no amalgam good for all cases. The one principally used should have good edge-strength, color, and be free from expansion and shrinkage, while one with less edge-strength, and which is not affected so much by moisture, is useful at the cervical margin or deep proximal cavities extending under the gums. Test your amalgam that has been mixed a short time. Some will have become very hard, almost turning the edge of a sharp knife; others will be crumbly.

**Question 114.** *Young lady in fair health has very loose lower incisors. The gums do not hug the teeth and have a purplish red appearance. The process seems to be absorbed, owing, perhaps, to deposits of serumal calculous, though the teeth now appear free from deposits.*

*The right upper central is attacked by some destroying agent on the mesial side of root, causing it to elongate, move forward and overlap the lateral, one-half its width, leaving a space between the centrals, about five-eighths of an inch wide. The root is denuded of its proper covering about a fourth of the distance to the apex, but on the mesial side only—the root is firm. What should be done?*

See answers in ITEMS of August, 1891, Question No. 18; July, 1892, Question No. 26; and September, 1892, Question No. 42.

**Question 115.** *Patient aged 45; has large gold fillings in upper front teeth, extending from gum to cutting edge. They have been in place six months. Soon after insertion the fillings became discolored; though repolished, they soon turned black again. Patient in perfect health. What is the cause, and how can it be prevented?*

See answers in ITEMS for February, 1892, Question No. 5.

G. W. B. See Question No. 5, February ITEMS, 1892.

**Question 116.** *What is the best plan to fasten lower centrals and laterals? They are not sore, and are free from tartar. If possible to induce the gum to take hold, what appliance is best?*

See Question and Answers No. 12, May ITEMS, 1892.

Dr. Moose, of Lenoir, N. C., believes a cement filling the best for chalky teeth. He often uses it in combination with amalgam mixed while in a plastic state, and in cervico-buccal cavities often prepares for filling by taking an impression in wax, filling the orifice of cavity of plastic model thus obtained with amalgam, and after amalgam is hard, a groove is cut around the filling, below the surface, and after polishing the surface of filling, cement is placed in cavity of the tooth, and the amalgam inlay forced in cement to its proper place.

The doctor agrees with many that six or seven hours at the chair is a good day's work for a dentist.

## EDITORIAL.

### WALKING.

There are only a few good, strong, dignified walkers. It is a pity it is not taught as an art. The advantages of good walking are so great that all should attain them, and the disadvantages of poor walking are so numerous and detrimental, all should avoid them. The trouble is, few observe their own walk, and most are not capable of self-criticism, or even of adopting advice without assistance.

"Thomas," said my father, once, as I returned home from college on vacation, "you are getting humpbacked. That will never do. For your own health's sake, you must throw your shoulders back, straighten up, expand your chest, and walk with more dignity."

This admonition was timely. I supposed I was walking as gracefully and as healthfully as any one. And yet when I visited our family physician, soon after this, he said :

"Why, Tommy, that cough is caused by your contracting your chest in walking and sitting. You will surely go into consumption if you do not develop the capacity of your lungs by throwing your arms and shoulders back and taking long, free, full inspirations, and thus give greater activity, capacity and power to the air- and blood-cells of your lungs. Not a day must pass that you do not take early and late brisk walks, with the strides, precision, and dignity of a soldier."

The adoption of this advice was my salvation.

Ten years after this, by my work at the dental chair, I had again acquired a stooping position. On a visit from my father, one of the first criticisms he made (and generally they are your best friends who criticise you) was :

"Why, my son, are you aware you are lopping your left shoulder? It is two inches lower than your right. And you are stooping again in your walk. When you left home, you sat and stood and walked very straight and with much grace."

Strange, I had not been aware of it. But the fact is, most of our bad habits are brought on so slowly as to be unobserved. We ought to be thankful for friends to tell us of them. This had undoubtedly been brought on by falling into a cramped position at the dental chair. Again I straightened up, and took frequent, long, recuperating walks, and soon found they not only gave me a more easy and dignified carriage, but they rid me of a pain in my chest and right side I had suffered from for more than a year.

We are sometimes too lazy to be good walkers. We go at such a snail's pace, worming our way along, loose-jointed and stumbling, swaying and twisting about, till we are the laughing-stock of the very boys. If we walk a little faster, we take such ungainly strides, and throw our heads forward with such gawky awkwardness that it shows an entire want of culture.

We show much of our character, temperament, and occupation in our walk. The thoughtful, meditating student and the plowboy can scarcely walk together. The bold, large-dealing merchant finds it difficult to keep pace with the man of irritable nerves and sensitive habits. The agile, quick-witted, free-hearted girl beside the stoical, reserved, fossilized bachelor are objects of ridicule. The French walk very differently from the German, and the negro from the white man, and the Chinese from the Indian.

English men and women generally sit, stand, and walk more erect than Americans, and this is attributed largely to the greater attention they give to walking. They are proverbial for their long, rapid, easy gait. They make walking the symmetrical development of all parts of the body. Even girls and women think nothing of a three- or four-mile walk, and men walk thirty or forty miles a day with ease and comfort. But they could not do this if they did not understand "the knack" of a healthful, easy gait. They are taught these things in England as an art. Even with great weight on their heads, they are able to walk off with such precision and grace of motion as not to require the load to be held by the hand.

The dentist, more than most workers, should walk much and often, and walk artistically, gracefully, and healthfully. It brings into flow and vigor, and normal activity and development, every

organ of the body. Nothing prepares him better for his professional labors. Sawing wood is a good exercise, but, for some reason, walking is a more agreeable medicine to take, and with a jolly companion it is better than medicine.

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### THE VALUE OF A GOOD DISPOSITION.

It is not so much a large business, or a great acquisition of money, or an exalted position in society, that makes life a success and gives contentment and happiness. These may bring irritation, nervous strain and exhaustion. Even from a selfish standpoint, we must seek comfort and a satisfying condition *in the quality of our disposition*. The elixir of life flows, not from without, but from within; it is found only in the sweet juices of our own nature. If these be dried up by the heat of our passions, the excitements of our ambition and the strain of business, we are a failure, though we have wealth and honor and fame. We can snarl and complain and grumble, and feel an indescribable want, a depressing void, a miserable unrest, in the midst of plenty and of luxuries; and with some, the more they have, and the greater their advantages to enjoy and acquire, the more their selfishness and unthankfulness and unreasonableness make them miserable, and makes miserable every one about them. Like leaches filling themselves with our life blood, the more we allow these human leaches to take, the more they cry, "Give! give! give!" till they burst with satiety.

No, no; let us learn that contentment with normal enjoyments and a cheery disposition, and efforts to scatter sunshine and goodness, are worth more, and give more pleasure, than miserly hoarding, epicurean indulgences and voluptuous gratifications.

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It is not always the best thing prevails, or that the best men lead. The masses do not think very carefully or clearly. They somewhat loosely and blindly recognize some men, some party, some prevailing influence, and follow because others follow. They find themselves in beaten grooves and continue in them; they



hardly know why. They recognize what is, and accept it because it is. New things, new ways, new anything is an innovation, and is resisted because it is an innovation, without much thought of its merit. They resist it because others resist it. In fact, in most things merit is not so important as custom. Why? Is not so much a concern or care. They can hardly say why this, that or the other man is their leader, or why this, that or the other thing prevails. They are like a flock of sheep—jumping a fence or going pel-mel in some direction because their bell-wether does. Why he goes there, or why he is the leader, or why each should not do as he chooses, is not considered. It is not considered; that is all. Perhaps this is a good thing for sheep. Is it as reasonable for man? God has given us the power of reason; why not use it? If a thing is right, why not do it? If it is best, why not adopt it? If it is for our interest, why not accept it? And how can we tell what is for the best without disciplining ourselves to independent reasoning?

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We suppose it is of little use to criticise the faults of correspondents, but they are sometimes a little trying. Here is one from New City—what State? Here is another in pencil, on both sides of brown paper, illegible. Now we open one from New York—city or State? If so, where? Who is this next from? No one can make out the signature. Some write so carelessly the printer cannot read it without blundering, and some of these are not of those who could not write better. They would be offended if we intimated such a thing, and yet they blame the printer and us if there is a mistake. We cut out two lines of one article sent to the *ITEMS*, and returned it to the author for an interpretation. Though it makes a complete sentence he has no idea what it is; yet he is indignant that we cannot make it out “by its connection with other sentences.” How many articles are thrown into the waste basket that would be cheerfully published if the chirography was better. Others with good ideas are rejected because no pains have been taken with its composition; and sufficiently radical changes would offend the writer, besides giving us much labor.

## QUALITY BEFORE QUANTITY.

It is not the man who does the most work who finds the greatest gains, but the man whose work is the most highly valued by the public. Quality is estimated above quantity.

"Put brains in it, my boy, put brains in it," was the advice of a sage to a young man working indifferently. And this is the difference between routine menial service and skilled labor. The secret of success the world over is in our ability to put brains into our work.

Hod carriers were eating lunch before a partly finished six-story building. One bright fellow said :

"Pat, carrying brick and mortar up those long ladders is slow, hard, expensive work. I'll put brains in our hods, and make them carry themselves."

"In faith," said Pat, "and how do you do that? And hav'n't I known many a young man, the better than you, that has spent all his wife's money, and his own too, trying to do with his head what muscles must do? Ye can't escape the sweat of yer brow."

"Pat, in less than six months you shall see hods of brick and mortar chasing each other up these giddy hights so fast it will make your head swim; and down the empties will come actually crying out, 'Fill me up, fill me up?'"

"All right, Joe; and then we'll all take a ride."

That young man was of the thoughtful, contriving kind they make boss workmen of, and he became a successful one, and an extensive contractor. This came about by his putting brains into his hods, so that they could travel up and down those great hights, quickly and economically, without human legs. The devise is common now.

Bright ideas are lying loose all about us, and the bright fellow picks them up. The rest work on in the grooves made for them. They seldom look about to see what better ways may be developed, and what better work they might do in these better ways. Let us be thankful for the knowledge we can get from others, and for the many excellent paths they have trodden for us, and for the beauti-

ful highways they have prepared for us; but let us continually be seeking to find still better ways and do better work and construct better things. This is putting brains into our work.

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### PRECISION.

Some people mumble and stumble and blunder along so clumsily it is a wonder they accomplish anything, and as surely as they would be specially precise they make some conspicuous mistake. Their fingers are all thumbs, their tongue is too thick, and their thoughts come tumbling and rumbling out, muddled and jumbled in fumbling confusion. Their muscles are unwieldy and flabby, their nerves lack tension and tone, and their whole manner is uncertain and clumsy.

Most of all this comes of laziness, thoughtlessness, and carelessness. There is a lack of method, sharpness, and culture. There is no cool preparation, clear meditation, and well-defined purpose. Everything is left at hap-hazard and in confusion, so that though there may be industry there is little accomplished. These persons are like an awkward, overgrown, useless, untrimmed tree in the garden,—all the more conspicuous because out of place.

Correctness, clearness, and cleanness; conciseness, distinctness, and definiteness, are admirable virtues. They produce distinguished characters, efficient workmen, and esteemed citizens. They put harmony, beauty, and skill into everything they touch. They are seen in their appearance and surroundings, and they stamp their whole life with a charm.

Reader, would you have these accomplishments,—these essentials to efficiency,—these true elements to greatness, goodness, and success? Begin with the commonest details now surrounding you; for in details must this precision commence. Let it begin in the very first thing you touch. And when that is done, ask yourself, Is that an example of precision? And so with the next thing you have to do, however insignificant and commonplace. This course will grow on you, as you cherish it, and gradually become

easier as it becomes a habit. Oh, it will possess you as an inspiration, and please you like a charm, and be to you a fortune.

These characteristics may be acquired by all, though not so easily by some. At first an attempt to be governed by them will be a hindrance, especially to this slipshod class. But gradually they will brighten you up and give quickness, exactness, and dexterity; refinement, quietness, and ease; solidity, importance, and stability, and finally a great gain in character and business. To cure stammering there must be deliberation in the pronunciation of every word; so our blunderer must be precise in everything he thinks and plans and says and does. A good motto for us all is, *First precision, then rapidity*. The reason so many of us are poor penmen is because nearly all of us are too careless, and in so much hurry in learning the art; and in its practice, we are forever in a hurry to get over our words. To be exact and skilful in anything, we must be patient and painstaking in every detail of learning, and habitually careful and watchful in practice.

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Some time since a young man sent us an essay for publication. It partook more of a schoolboy's composition than an article for a professional magazine. But it had evidently been written with great care. Its typography was boyish, but the best he could do; the composition was labored, but displayed thought; and it was evidently the culmination of repeated effort. Therefore we went over it carefully and sent it back with some friendly corrections and comments. He took our criticisms in good part, and again made the whole a study. Then he returned it with thanks for our help, and it was published. In time he sent us another article which was a great improvement on the first. This, at his request, we treated in the same way. And still another. It is now very evident that, during the four years he thus made composition a special study, he had worked hard to attain a clear, terse, acceptable style; for he is now a bright, vivacious, interesting writer, and what he says is practical and useful.

## NOTES.

Sir Willam Gull was asked by a lady if he did not consider experiments on animals as cruel. "Madam," he said, "there is no cruelty comparable to ignorance."

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To give immediate relief to pain, chloroform is a much better medium for our medicaments than alcohol. The chloroform tincture of aconit, for instance, acts much quicker than the alcoholic tincture.

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The tales told by Dr. I. M. Laufer, as referred to in our International Department, are partly true. But from reports from other sources we believe this Russian is much too credulous. The more we become acquainted with "wild men" everywhere, the less truth we find in many wild stories.

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The Dental Society of Moscow has received permission to issue a quarterly journal in that city, edited by a member-founder of that society, Dr. Max Pavlovitch Fineman. The name of the journal is to be *Journal of Dental Science and Art*. Of course the censor will have to see it before it is issued.

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**PAINLESS CLAMP ATTACHMENT.**—Dr. Albin Lenhardtson, in the *Odontologisk Tidskrift*, recommends, to lessen the pain in adjusting the clamp, that its claws be covered with a piece of rubber skin of corresponding size. In this there is another advantage—the hold on the tooth being stronger on account of the elasticity of the rubber.

\* \* \*

Coryl is a new local anesthetic which acts through cold similar to chlorid of ethyl. Its boiling point being at 0, it is less active than the latter, whose boiling point is lower than 22°, and occasions, consequently, less unpleasant after effects.

The experiments at the Paris clinics yielded very favorable results. It is methylized chlorid of ethyl.

\* \* \*

The idea that a tooth made tender by ulceration or abscess, or surrounding inflammation, is "too sore to be extracted," is a false notion. If it must be extracted, the sooner it is done the better. While in this condition it extracts much easier than after the sore-

ness has passed away ; neither is the pain of extracting more severe. Pushing on it increases the pain, but pulling on it really relieves it.

\* \* \*

Familiarity breeds contempt. While there should be sociality, kindness, and sympathy, frankness, teachableness, and affability, there must be dignity, reserve, and manliness. Effeminacy, fawning, flattery and silliness are repulsive. The man who cannot discern between these two classes of qualities has not the nature to make a successful dentist, and the man who can and has not the purity, refinement, and strength to be unblamable, had better step down and out.

\* \* \*

And still it comes ! We have just issued a Columbian Edition of "A Mother to a Mother, on the Care of Children's Teeth," by "Mrs. M. W. J." Price, 25 cents. The Wilmington Dental Mfg. Co.

The large sale this book has had is a significant proof of its value. The unlimited praise it has received from our foremost dentists is a confirming proof. Hundreds have not only written in its praise, but ordered by the hundred for distribution among their patients. Our first edition was so large, some had doubts of our ever selling it. But this, and a second and third editions, still larger, are sold ; and now we present our Columbian Edition, which is a gem in appearance and an improvement in matter. It is really the maturity of many years' study, experience, and observation, by a good, intelligent woman, intimately acquainted with dentistry.

\* \* \*

The note by Dr. Millim, in regard to the whiteness of African teeth, needs a foot-note. It is true that they are white, as are the teeth of the pure Africans in this country, but the white is a stony and not a translucent white. It is this that makes them show so glitteringly. They reflect rather than absorb light. As a matter of fact they are not so white as the white teeth of our own people. It is the same with the white of the eye, noticed in that race. The white is really not greater than that of the light-skinned race, but the dusky skin makes it appear so. The question of vegetable food hardly enters, as the Irish, who live on potatoes, should, by that rule, have teeth of exceeding whiteness. But do they ?

This leads me to say that one of the troubles with artificial teeth is that they reflect light. A tooth that looks fairly well by daylight will give away the wearer by gaslight. In this respect the English porcelain teeth are better than the American. They are more translucent, though we are getting in line with them.

# FOR OUR PATIENTS.

## SOWING SEEDS.

Out in the highways, wherever we go,  
Seed we must gather, and seed we must sow ;  
Even the tiniest seed has a power,  
Be it a thistle, or be it a flower.

Out of each moment some good we obtain,  
Something to winnow and scatter again ;  
All that we listen to, all that we read,  
All that we think of, is gathering seed.

Gathering seed, we must scatter as well ;  
God will watch over the place where it fell.  
Only the gain of the harvest is ours ;  
Shall we plant thistles, or shall we plant flowers ?

*Josephine Pollard.*

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## IS IT ADVANCE OR RETREAT ?

There is no standing still in any profession. The whole world moves. A state of rest means rust, and rust means retrogression. Every individual must do his part, which is to make an effort to advance, or be left behind without even the poor distinction of becoming a milestone to mark the world's progress. The needs of the people are forever changing, the ideals of perfection always rising, the faculty of discrimination constantly growing. That which was admired yesterday is criticised to-day ; to-morrow it will be commonplace. One cannot, if he dare, stand still. He may move in the van of progress as a leader ; he may let its onward sweep carry him with it, an inert nonentity in the sea of human endeavor ; he may drop out and be left behind, but he cannot stand still. If he attempts to stand still, even for an instant, the crowd will walk right over him. The moment he ceases to advance he begins to retreat. The backward movement may be slow at first, but its speed increases apace. There is no standing still, and the more one advances the more he must. Slackness in quality is more noticeable in good work than in medium or poor. To-morrow must have a higher standard of perfection than to-day, else the halt which precedes retreat is called. The call to every man is to advance and still keep advancing, not as a nonentity, but as a leader. It is not given to every one to be *the* leader, but every man can be *a* leader.

*Cosmos.*

## WHY GOLD FILLINGS DISCOLOR.

I often notice in the dental journals the question, Why do gold fillings discolor? Many times during my practice I have had gold fillings discolor, and others made from the same gold and at the same time remain bright. I finally solved the mystery. It was caused by using files or burnishers, which had previously been used in finishing amalgam fillings, or from small pieces of amalgam adhering to the gold used in making the fillings. Let one burnish a particle of amalgam on a gold filling, and after filing scrape and burnish till they are bright, the chances are that within two weeks the patient will return with the fillings as dark as a copper filling after a year's use.

*F. E. Coomes.*

[Nitrate of ammonia formed in the pockets under the gum margin of some teeth also discolor gold fillings. This nitrous acid from decomposed meat with the ammonia in their nascent union is also a prominent cause of disintegration of the surface of some teeth near the gum margin.—ED. ITEMS.]

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LYSOL.

Attention having been drawn by the recent cholera "scare" to the popularity of carbolic acid as a disinfectant, notice is being taken in medical circles of the even superior advantages for many purposes of the cresols as disinfectants. It was discovered that crude carbolic acid made soluble by the action of sulphuric acid surpassed in germicidal power an equally strong solution of pure phenol, besides which creolin, though free from carbolic acid, was proved to be of unmistakably superior disinfecting activity to the latter. Being insoluble in water, however, these cresols were neglected till the idea was hit on of combining them with rosin soap, Though very efficacious, these preparations were only emulsions; and it remained for the cresols to be made soluble, as now in the form of lysol, that what can be called the ideal soluble disinfectant should be made generally available. Lysol is produced by dissolving in fat, and subsequently saponifying, with the addition of alcohol, the fraction of tar oil which boils between 190° and 200° Cent. It is a brown, oily-looking, clear liquid, with a feebly aromatic creosote-like odor. It contains 50 per cent of cresols; and it is miscible with water to a clear, saponaceous, frothing fluid. It acts, to all intents and purposes, as a soap; and it is admirably adapted for surgical operations.



## NOTICES.

AMERICAN DENTAL ASSOCIATION.—The thirty-third annual session of the American Dental Association will be held in Chicago, commencing Saturday, August 12th, 1893, at 10 o'clock A. M.

*Geo. H. Cushing, Recording Secretary.*

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The class of '90 and '91 of the Ohio College of Dental Surgery, will meet at South Pier Hotel, Windsor Park, Chicago, August 15th. Special hotel rates have been secured. All members are especially requested to be present.

*Don D. Cornell, Secretary.*

\* \* \*

Governor Peck, of Wisconsin, has reappointed Edgar Palmer, of La Crosse, on the State Board of Dental Examiners. This is Dr. Palmer's third term on the Board, having acted as Secretary since its first meeting in 1885.

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Notes on anesthetics, in *Dental Surgery*, by Drs. A. S. Underwood, and C. C. Braine, of England, is an exhaustive treatise on this subject. It is published by C. Ash & Sons, London, and can be had at The Wilmington Dental Mfg. Company, Philadelphia.

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The twenty-fourth annual session of the Virginia Dental Association will be held at Charlottesville, Tuesday, August 8th, 1893. All dentists in good standing are invited to meet with us, and will receive a cordial welcome.

*J. Hall Moore, Corresponding Secretary.*

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The Colorado State Board of Dental Examiners met at the Denver Dental College, Monday April 17th, 1893; after organizing, the following officers were elected: President, Dr. J. N. Chipley, of Pueblo; Secretary, Dr. C. N. Guyer, of Denver; Treasurer, Dr. G. A. Dillie.

*C. N. Guyer, Secretary.*

\* \* \*

P. Blakiston, Son & Co., Philadelphia, send us Quiz Compend, No. 13, by Dr. George W. Warren, of the Pennsylvania Dental College. These are hints and questions on Dental Pathology and Dental Medicine, in Dr. Warren's familiar style, always interesting and instructive. Price \$1.00. -

The Virginia State Board of Dental Examiners will meet at Charlottesville, Thursday, August 10th, 1893, to examine candidates to practice dentistry in Virginia. Only graduates of reputable dental colleges are eligible to examination. For particulars address the Secretary at Charlottesville.

*W. E. Norris, Secretary.*

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The place for holding the business meeting of the Southern Dental Association is the Kindergarten Hall, No. 10 Vanburen street, Chicago, Ill. Time for meeting is Friday, August 11th, at 10 A. M., this being the nearest date we could secure previous to the meeting of the Columbian Dental Congress, the Monday following.

*S. W. Foster, Secretary.*

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The Washington State Dental Society had a successful session at its sixth annual meeting. The following are its present officers:

President, Dr. P. H. Carlyon, Olympia; 1st Vice-President, Dr. B. S. Scott, Ellensburg; 2nd Vice-President, Dr. C. A. Darling, Fairhaven; Secretary, Dr. A. S. Oliver, Olympia; Treasurer, Dr. J. N. Prather, Seattle. The next annual meeting will be held in Tacoma in May, 1894.

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The Nebraska State Dental Society had an enthusiastic and well-attended meeting from May 16th to 19th inclusive. Many new members joined the Society.

The following officers were elected for the ensuing year: President, Dr. T. F. Skeede, Seward; Vice-President, Dr. J. A. Dieffenbacher, York; Recording Secretary, Dr. J. T. McCleery, Beatrice; Corresponding Secretary, Dr. W. C. Davis, Lincoln; Treasurer, Dr. H. J. Cole, Norfolk.

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The twelfth annual meeting of the National Association of Dental Examiners will be held in the house of the Columbian Dental Club, No. 300 Michigan avenue, Chicago, Friday, August 11th, 1893, at 10 A. M. Attention is called to the following resolution, passed August 5th, 1891:

*Resolved*, That the various State Boards of Dental Examiners be requested each year, in season for the annual meeting, to make to the Secretary a written report of their examinations, accompanied by detailed or tabulated statements.